

A LIST AND BIBLIOGRAPHY OF THE AQUATIC AND WATER-ASSOCIATED INSECTS OF NEW ZEALAND

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Abstract. A list of the New Zealand aquatic, semi-aquatic, and some closely associated insects, follows a general introduction and discussion by insect orders. A bibliography covering the past twenty years is given.

The previous list of aquatic and semi-aquatic insects of New Zealand (Wise 1965) was in the nature of a preliminary list. Since that list was prepared there have been many changes in classification and additions to the knowledge of the fauna, and the intention in the present list is to indicate up-to-date classification and to present a better picture of the possible extent of the aquatic and water-associated insect fauna.

Because of lack of knowledge of the association of Collembola and water surfaces, this group, which is now considered by me as a separate class of the superclass Hexapoda, and which was represented by only a few species in the earlier list, is not included here. The present list is consequently restricted to the class Insecta (*sensu stricto*). General classification follows that in the recent textbook "The insects of Australia" (Division of Entomology, C.S.I.R.O. Australia, 1970) but classification differs within some orders.

The full list of references given here constitutes a bibliography covering the past twenty years, continuing from Miller's "Bibliography of New Zealand Entomology" (1956) which covered the period up to 1952. Many of the works referred to for one group of insects also contain information on other groups.

General information on the aquatic and water-associated insects of New Zealand is included in such publications as Marples (1962), Pendergrast & Cowley (1966), Stout (1969a, 1969b), Dumbleton (1970b), Miller (1971) and Sharell (1971). Wise (1956) and Winterbourn (1964b) have examined the fauna of Little Barrier I., Watson (1972) the lotic fauna of Red Mercury I., and the faunas of the subantarctic islands south of New Zealand have been discussed by Brundin (1962, 1966), Illies (1963a, 1964b), Wise (1964, 1972), Gressitt, Rennell & Wise (1964), Gressitt & Wise (1971) and Peters (1971). Pond and lake faunas have been treated in such papers as Cunningham et al (1953), Byars (1960), Barclay (1964), Barker (1966) and Stout (1969a); river and stream faunas in such as Allen (1959), McLean (1966) and Stout (1969b). Faunas of polluted waters have been discussed by Hirsch (1958), of thermal waters by Winterbourn & Brown (1967), Winterbourn (1968b, 1969, 1970, 1973a, 1973b), Dumbleton (1969b), Brock & Brock (1971), of mineralised waters by Bayly (1967), Dumbleton (1969b). Aquatic faunas associated with trout and other fishes have been examined by Percival (1932), Allen (1951, 1952) and Hopkins (1965, 1970). Hopkins, Brewerton & McGrath (1966) and Dacre & Scott (1973) investigated the effects of agricultural insecticides on stream faunas, and Burnet (1973) the effects of a weedicide. May (1963) recorded aquatic species in caves, Brundin (1966) and Dumbleton (1973a) in glacial waters and Marshall (1973) in cold spring waters. Rearing techniques were described by Craig (1966), Forsyth (1968), and survey methods by Spiller (1965).

The classification used here for the Ephemeroptera is based on that of Edmunds (Edmunds, Allen & Peters 1963, Edmunds 1972), not of Demoulin (1969). Recent additions to knowledge of the mayfly fauna have been made by Penniket (1961, 1962a, 1962b, 1966b, 1969), Wisely (1961, 1962, 1965), McLean (1966, 1967a, 1967b, 1970), and Peters (1971).

In the Odonata, the modified Fraser (1957) classification used by O'Farrell (1970) is followed. Although this list is not intended for taxonomic change the use of this classification places the one lestad species in an anomalous position as Lieftinck (1960) used the combination *Lestes (Indolestes) colenisonis*; a combination incorrectly listed by Wise (1965) and Penniket (1966a) in the family Sympecmatidae. The species is sympecmatine, however, and the older Tillyard combination *Austrolestes colenisonis* (e.g. Fraser 1960), as still commonly used (Pendergrast & Cowley 1966), Winterbourn 1968, Stout 1969a, 1969b, Scott 1971, Miller 1971) is accepted here. Wolfe (1953) studied one genus, Armstrong (1958a, 1958b, 1958c) has recorded several occurrences, and Wise (1962) and Scott (1971) have written on immatures.

Illies (1960, 1961a, 1961b, 1962, 1963a, 1964a, 1964b, 1965, 1969), McLellan (1965, 1966, 1967, 1968, 1969, 1973, McLellan & Winterbourn 1968) and Winterbourn (1965, 1966, 1968a) have added greatly to our knowledge of the Plecoptera in recent years and classifications used by them are used here. So-called terrestrial (Wisely 1953) or semi-terrestrial (Illies 1963a, 1964b) species included previously (Wise 1965) are again included as this is essentially an aquatic order and the species concerned occur in wet places; mites have been recorded from one of these species (Wisely 1953, Womersley 1953). In a little-known paper, Sámal (1921) recorded four species of Plecoptera from New Zealand but three must have been specifically or generically mis-identified as the genera are not otherwise recorded in New Zealand. Of these three, *Gripopteryx cancellata* (Pictet, 1841) (Sámal 1921, 18 (3, 4): 67) was recorded as a South American species by Illies (1963b), *Pteronarcella atra* Sámal, 1921 (Sámal 1921, 18 (1, 2): 14-20, 18 (3, 4): 67-68) has recently been established as an Australian species, *Acruroperla atra* (Sámal, 1921) by Illies (1969), and *Gripopteryx zealandica* is recorded in this list as *species dubiae*; the fourth species was *Stenoperla prasina* (Newman 1845) (Sámal 1921, 18 (3, 4): 61-64, 70) a well-known New Zealand endemic.

There are no aquatic Orthoptera in New Zealand but Edwards (1952) has recorded submergence of stream-side wetas (*Paraneonetus* sp., family Rhabdiphoridae).

In the Hemiptera: Heteroptera there are several aquatic and semi-aquatic families; classification follows that used by Woodward et al (1970). Three species have been added to the Saldidae by Cobben (1961) in a paper not noticed for the previous list. The Saldidae, though not truly semi-aquatic, are included because of their close association with water; the breeding of one species has been studied by Mason (1973). The family Gerridae is represented by one marine semi-aquatic species recorded by Myers (1921). Woodward (1954) has recorded a second species of the semi-aquatic Veliidae; Don (1967) has studied the common species. A species of the semi-aquatic Hydrometridae was recorded in New Zealand by Woodward (1952). Pendergrast (1959) recorded the family Mesoveliidae in New Zealand from the presence of one semi-aquatic and one terrestrial species, both of which are still unnamed. Young (1962) revised the aquatic Corixidae and Notonectidae.

The one dobson-fly species is now classified in the order Megaloptera (e.g. Riek 1970), not in the order Neuroptera (Wise 1963, 1965).

There are many changes and corrections in the order Coleoptera; the modified Crowson classification (Crowson 1967) is followed here. The aquatic family Dytiscidae has been revised by Ordish (1966, 1967) and Wise (1961) described some immatures. Ochs (1949) had earlier established the one recorded New Zealand gyrid species *Gyrinus huttoni* Pascoe, 1877, as an Australian species *G. convexiusculus*, but there is no recent confirmation that this species or the family Gyrinidae occur in New Zealand. One species of Hydraenidae is known to be aquatic. There are many species of Hydrophilidae in New Zealand, but only those known to be aquatic are listed. In a paper on Hydrophilidae of thermal waters, Winterbourn (1970) recorded four species, including one unnamed species of *Paracymus*.

There has, in the past, been considerable confusion in the classification of some of the New Zealand Coleoptera families now in the Eucinetoidae and Dryopoidea. The Dascillidae in Hudson's list (1934) are mostly Helodidae and some helodid beetles are aquatic (e.g. Watson 1972), but none are specifically recorded as such. The family Dryopidae of Hudson's list (1934) includes parnines and elmids. The term "parnid" or "Parnidae" has been used for aquatic beetles and larvae (Phillips 1929, Percival 1932, Dickinson 1951, Allen 1951, 1952, 1959, Marples 1962, Hopkins 1965, Stout 1969b) but, although the family Dryopidae (*sensu* Crowson 1967) contains the group originally known as "Parnina", none of the New Zealand dryopids are known to be aquatic and some are known to be terrestrial. The family Elmidae (*sensu* Crowson 1967) (also variously known as Elminthidae, Helmididae, Helminthidae) contains the aquatic genus *Hydora*, recorded by Hudson (1934) and Wise (1965) in Dryopidae. It appears that the terms "parnid" and "Parnidae" have been used for elmids (e.g. Phillips 1929, Hopkins 1965 — "Parnidae", 1970 — "Elmididae") or even for helodids or other aquatic beetles and/or their larvae. The reason for the "parnid period" in the New Zealand literature is not apparent, as Tillyard (1926) had recorded the family as "Dryopidae (Parnidae)" and had clearly placed the parnines in Dryopidae: Dryopinae and the genus *Hydora* in Dryopidae: Helminae. Winterbourn (1964a) has correctly keyed larvae of Helodidae and Elmidae. An aquatic weevil (Curculionidae) has recently been recorded by May (1970).

One species of Mecoptera has long been known in New Zealand but the unusual aquatic habit of larvae of this species has only been discovered and recorded in recent years by Pilgrim (1969, 1970, 1972).

In the Diptera, several families are aquatic and many families contain aquatic species; the general classification here follows Colless & McAlpine (1970). Some of the Tipulidae are aquatic in freshwater and marine littoral habitats but few species are recorded. All species of the subgenus *Idioglochina* are probably marine (Alexander 1959, 1972) and the three species listed are associated with the sea shore as are the other three species of *Limonia* (Wise 1965). A few species of the New Zealand Psychodidae are aquatic; Satchell (1954) recorded *Pericoma* larvae on wet stones and the one species listed, *Psychoda alternata*, was recorded as aquatic by Miller & Watt (1915) under the name of *conspicillata*. In his work on the mosquitoes of the South Pacific and his later revision of the Culicidae of New Zealand, Belkin (1962, 1968) has placed the dixids as a subfamily of the Culicidae; Belkin's classification is used here. The two mosquito species breeding in salt water pools on the coast, *Opifex fuscus* and *Aedes chathamicus*, were discussed by Dumbleton (1962a) who has written several papers on this family (1963c, 1965, 1968, 1970a). Pillai (1966) has described a new species of Culicidae, a gynandromorph of which was discussed by Dobrotworsky (1972), has given other New Zealand records and has written on mosquito parasites (Pillai 1965,

1968a, 1968b, 1969, Pillai & MacNamara 1968, Pillai & Smith 1968); other recent authors are Marks (1958, Knight & Marks 1952, Klein & Marks 1960, Marks & Nye 1963), Nye (1962, Nye & McGregor 1964), McGregor (1963, 1965), Haeger & Provost (1965), Forsyth (1968), and Foot (1970a, 1970b). One mosquito species, *Culex annulirostris*, collected once in New Zealand (Wise 1965) is not now listed. A major work by Brundin (1966) has added considerably to our knowledge of the New Zealand Chironomidae and Forsyth (1971) has also added new species. Freeman (1959) revised the Chironomidae and later (1961) included generic changes and new records in the New Zealand chironomids. Brundin (1962) recorded *Haliryus macquariensis* and *Smittia* sp. from Macquarie I. *Chironomus* species have been discussed in relation to saline waters (Lamb 1961), warm waters (Winterbourn & Brown 1967, Winterbourn 1968b), polluted waters (Hirsch 1958, Spiller & Forsyth 1970), lake waters (Armstrong 1935, Barker 1966), and mineralised waters (Dumbleton 1969b). Fossil chironomid species, including *Dryadotanytarsus duffi* Deevey, 1955, were recorded from swamp deposits by Deevey (1955). Aquatic larvae of the family Ceratopogonidae have been collected but the species concerned are not known to the author. Dumbleton (1971) discussed the possibility that the biting ceratopogonid midge, *Styloconops myersi* (Tonnoir, 1924), is a brackish water species but had been unable to trap it in such a situation and Laurence & Mathias (1972) have since recorded a species of *Leptoconops* (*Styloconops*) breeding in beach sand above high tide level; the New Zealand species is consequently not listed here. Dumbleton, who has recently (1973b) revised *Austrosimulium*, the only genus of Simuliidae in New Zealand, had also published earlier on this group (Dumbleton 1953, 1962b, 1963b, 1963d, 1964, 1969a, 1970a); Miller (1969) recorded some predators of sandflies. The aquatic family Thaumaleidae (Dumbleton 1969a) contains two New Zealand species. The family Blepharoceridae has been revised and discussed by Dumbleton (1963a, 1963d, 1970a) and also by Craig (1963, 1967a, 1967b, 1969).

In the Diptera: Brachycera, some larvae of the Tabanidae occur in wet places about waterfalls, and some are aquatic (Pendergrast & Cowley 1966). Some of the Stratiomyidae are aquatic but only one species is recorded (Wise 1965). Dumbleton (1966) described aquatic larvae of two Empididae species and noted that all known larvae of the subfamilies Hemerodromiinae and Clinocerinae are aquatic; all New Zealand species of these two subfamilies are consequently listed here from Collin (1928), Miller (1950) and Smith (1964) in order to give a better representation of the aquatic fauna. In the family Syrphidae the rat-tailed maggots of *Helophilus* and *Eristalis* are recorded as aquatic by Miller (1971). Many species of the family Ephydriidae are aquatic but few are recorded (Wise 1965); Winterbourn & Brown (1967), Winterbourn (1968b, 1969) and Dumbleton (1969b) have given recent records of species in thermal and mineralised waters. Some species of the family Muscidae are also aquatic, e.g. *Limnophora* spp. (Pendergrast & Cowley 1966), including some which inhabit the marine littoral zone (Wise 1965).

A revolutionary classification of Trichoptera by Ross (1967) is accepted here. *Allocentrella* is the only doubtful genus but it is here retained close to *Pycnocentrella* now in the Pycnocentrellidae. This order was revised for New Zealand by Mosely & Kimmins (1953, Kimmins 1960) and further information has been provided by McFarlane (1956, 1960, 1964, 1966, 1969, 1973), Wise (1958, 1962, 1964, 1970, 1972), Leader (1970, 1972a, 1972b) and Michaelis (1973). It may be noted that, despite the title "Contribution à la connaissance de la faune trichoptérologique de la Tasmanie et de la Nouvelle-Zélande" and similar information in the abstract and introduction, none of the species described by Jacquemart (1965) can be recognised as New Zealand species by the localities given.

Only one Lepidoptera species in New Zealand has an aquatic larva, which has been described by Pendergrast & Cowley (1966).

Order EPHEMEROPTERA

Superfamily HEPTAGENIOIDEA

Family SIPHLONURIDAE

Subfamily SIPHLONURINAE Banks, 1900

Genus **Nesameletus** Tillyard, 1933

Nesameletus Tillyard, 1933, Proc. Linn. Soc. N.S.W. 58: 11.

Nesameletus ornatus (Eaton, 1883)

Chirotenetes ? ornatus Eaton, 1883, Trans. Linn. Soc. London (2) Zool. 3 (1): Pl. 19 (1883), (3): 208 (1885), (6): 321 (1888).

Nesameletus flavitinctus (Tillyard, 1923)

Ameletus flavitinctus Tillyard, 1923, Trans. Proc. N.Z. Inst. 54: 226.

Subfamily RALLIDENTINAE Penniket, 1966

Genus **Rallidens** Penniket, 1966

Rallidens Penniket, 1966, Rec. Canterbury Mus. 8 (2): 163.

Rallidens mcfarlanei Penniket, 1966

Rallidens mcfarlanei Penniket, 1966, Rec. Canterbury Mus. 8 (2): 164.

Subfamily AMELETOPSINAE Edmunds, 1957

Genus **Ameletopsis** Phillips, 1930

Ameletopsis Phillips, 1930, Trans. Proc. N.Z. Inst. 61: 324.

Ameletopsis perscitus (Eaton, 1899)

Ameletus perscitus Eaton, 1899, Trans. Ent. Soc. London, 1899: 291.

Subfamily COLOBURISCINAE Edmunds, 1963

Genus **Coloburiscus** Eaton, 1888

Coloburiscus Eaton, 1888, Trans. Linn. Soc. London (2) Zool. 3 (6): 346.

Coloburiscus humeralis (Walker, 1853)

Palingenia humeralis Walker, 1853, List neuropterous insects Br. Mus. Part 3: 552.

Coloburiscus tonnoiri Lestage, 1935

Coloburiscus tonnoiri Lestage, 1935, Bull. Annl. Soc. ent. Belg. 75: 353.

Subfamily ONISCIGASTRINAE Lameere, 1917

Genus **Oniscigaster** McLachlan, 1873

Oniscigaster McLachlan, 1873, Ent. Mon. Mag. 10: 109.

Oniscigaster wakefieldi McLachlan, 1873

Oniscigaster wakefieldi McLachlan, 1873, Ent. Mon. Mag. 10: 110.

Oniscigaster intermedius Eaton, 1899

Oniscigaster intermedius Eaton, 1899, Trans. Ent. Soc. London 1899: 292.

Oniscigaster distans Eaton, 1899

Oniscigaster distans Eaton, 1899, Trans. Ent. Soc. London 1899: 293.

Family SIPHLAENIGMATIDAE Penniket, 1962

Genus **Siphlaenigma** Penniket, 1962

Siphlaenigma Penniket, 1962, Rec. Canterbury Mus. 7 (5): 389.

Siphlaenigma janae Penniket, 1962

Siphlaenigma janae Penniket, 1962, Rec. Canterbury Mus. 7 (5): 390.

Family LEPTOPHLEBIIDAE

Genus **Zephlebia** Penniket, 1961

Zephlebia Penniket, 1961, N.Z. Ent. 2 (6): 8.

Subgenus **Zephlebia** Penniket, 1961

Zephlebia (Zephlebia) Penniket, 1961, N.Z. Ent. 2 (6): 8.

Zephlebia (Zephlebia) versicolor (Eaton, 1899)

Atalophlebia versicolor Eaton, 1899, Trans. Ent. Soc. London 1899: 286.

Zephlebia (Zephlebia) dentata (Eaton, 1871)

Leptophlebia dentata Eaton, 1871, Trans. Ent. Soc. London 1871: 80.

Zephlebia (Zephlebia) cruentata (Hudson, 1904)

Atalophlebia cruentata Hudson, 1904, N.Z. Neuroptera: 33.

Zephlebia (Zephlebia) borealis (Phillips, 1923)

Atalophlebia borealis Phillips, 1923, Trans. Proc. N.Z. Inst. 61: 356.

Subgenus **Neozephlebia** Penniket, 1961

Zephlebia (Neozephlebia) Penniket, 1961, N.Z. Ent. 2 (6): 9.

Zephlebia (Neozephlebia) scita (Walker, 1853)

Baetis scita Walker, 1853, List neuropterous insects Br. Mus. Part 3: 570.

Zephlebia (Neozephlebia) nodularis (Eaton, 1871)

Leptophlebia nodularis Eaton, 1871, Trans. Ent. Soc. London 1871: 81.

Genus **Deleatidium** Eaton, 1899

Deleatidium Eaton, 1899, Trans. Ent. Soc. London 1899: 288.

Deleatidium vernale Phillips, 1930

Deleatidium vernale Phillips, 1930, Trans. Proc. N.Z. Inst. 61: 360.

Deleatidium lillii Eaton, 1899

Deleatidium lillii Eaton, 1899, Trans. Ent. Soc. London 1899: 289.

Deleatidium autumnale Phillips, 1930

Deleatidium autumnale Phillips, 1930, Trans. Proc. N.Z. Inst. 61: 371.

Deleatidium fumosum Phillips, 1930

Deleatidium fumosum Phillips, 1930, Trans. Proc. N.Z. Inst. 61: 372.

Deleatidium myzobranchia Phillips, 1930

Deleatidium myzobranchia Phillips, 1930, Trans. Proc. N.Z. Inst. 61: 373.

Deleatidium cerinum Phillips, 1930

Deleatidium cerinum Phillips, 1930, Trans. Proc. N.Z. Inst. 61: 382.

Genus **Atalophlebioides** Phillips, 1930

Deleatidium (Atalophlebioides) Phillips, 1930, Trans. Proc. N.Z. Inst. 61: 336.

Atalophlebioides sepia (Phillips, 1930)

Deleatidium (Atalophlebioides) sepia Phillips, 1930, Trans. Proc. N.Z. Inst. 61: 383.

Atalophlebioides cromwelli (Phillips, 1930)

Deleatidium (Atalophlebioides) cromwelli Phillips, 1930, Trans. Proc. N.Z. Inst. 61: 385.

Atalophlebioides aucklandensis Peters, 1971

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Atalophlebioides aucklandensis Peters, 1971, Pacific Insects Monogr. 27: 47.

Superfamily EPHEMEROIDEA

Family EPHEMERIDAE

Genus **Ichthybotus** Eaton, 1899

Ichthybotus Eaton, 1899, Trans. Ent. Soc. London 1899: 285.

Ichthybotus hudsoni (McLachlan, 1894)

Ephemera hudsoni McLachlan, 1894, Ent. Mon. Mag. (2) 5: 270.

Ichthybotus bicolor Tillyard, 1923

Ichthybotus bicolor Tillyard, 1923, Trans. Proc. N.Z. Inst. 54: 228.

Order **ODONATA**Suborder **ZYGOPTERA**Superfamily **COENAGRIONOIDEA**Family **COENAGRIONIDAE**Subfamily **ISCHNURINAE**Genus **Ischnura** Charpentier, 1840*Ischnura* Charpentier, 1840, Libell. Europ., 20.**Ischnura aurora aurora** (Brauer, 1865) NZ, Kermadec Is*Agrion (Ischnura) aurora* Brauer, 1865, Verh. zool.-bot. Ges. Wien 15: 510.Subfamily **PSEUDAGRIONINAE**Genus **Xanthocnemis** Tillyard, 1913*Xanthocnemis* Tillyard, 1913, Proc. Linn. Soc. N.S.W. 37 (3): 465.**Xanthocnemis zealandica** (McLachlan, 1873) NZ, Chatham Is*Telebasis zealandica* McLachlan, 1873, Ann. Mag. Nat. Hist. (4) 12: 35.Superfamily **LESTINOIDEA**Subfamily **LESTIDAE**Subfamily **SYMPECMATINAE**Genus **Austrolestes** Tillyard, 1913*Austrolestes* Tillyard, 1913, Proc. Linn. Soc. N.S.W. 37 (3): 421.**Austrolestes colenisonis** (White, 1846) NZ, Chatham Is*Agrion colenisonis* White, 1846, Zool. Voy. Erebus & Terror 2 Insects: Pl. 6, fig. 3.Suborder **ANISOPTERA**Family **PETALURIDAE**Subfamily **PETALURINAE**Genus **Uropetala** Selys, 1857*Uropetala* Selys, 1857, Monogr. Gomphines, 368.**Uropetala carovei carovei** (White, 1843)*Petalura carovei* White, 1843, In Dieffenbach, Travels in N.Z. 2: 281.**Uropetala carovei chiltoni** Tillyard, 1921*Uropetala chiltoni* Tillyard, 1921, Trans. Proc. N.Z. Inst. 53: 342.Family **AESHNIDAE**Subfamily **AESHNINAE**Genus **Aeshna** Fabricius, 1775*Aeshna* Fabricius, 1775, Syst. Ent., 424.**Aeshna brevistyla** Rambur, 1842 NZ, Kermadec Is*Aeshna brevistyla* Rambur, 1842, Hist. Nat. Ins. Névropt., 205.Subfamily **ANACTINAE**Genus **Hemianax** Selys, 1883*Hemianax* Selys, 1883, Bull. Acad. Sci. Belg. (3) 5: 723.**Hemianax papuensis** (Burmeister, 1839)*Aeschna papuensis* Burmeister, 1839, Handb. d. Ent. 2: 841.

NZ, Kermadec Is

Family CORDULIIDAE

Subfamily CORDULIINAE

Genus **Antipodochlora** Fraser, 1939*Antipodochlora* Fraser, 1939, Proc. R. Ent. Soc. London (B) 8: 94.**Antipodochlora braueri** (Selys, 1871)*Epitheca braueri* Selys, 1871, Syn. Cordulines, 50.Genus **Hemicordulia** Selys, 1870*Hemicordulia* Selys, 1870, Anns. Soc. ent. Belg. 14, C.R., v.**Hemicordulia australiae** (Rambur, 1842)

NZ, Kermadec Is

Cordulia australiae Rambur, 1842, Hist. Nat. Ins. Névropt., 146.Genus **Procordulia** Martin, 1906*Procordulia* Martin, 1906, Collect. Selys Cat. 17: 11, 16.**Procordulia smithii** (White, 1846)*Cordulia smithii* White, 1846, Zool. Voy. Erebus & Terror 2 Insects: Pl. 6, fig. 2.**Procordulia grayi** (Selys, 1871)*Epitheca grayi* Selys, 1871, Syn. Cordulines, 50.

Family LIBELLULIDAE

Subfamily SYMPETRINAE

Genus **Diplacodes** Kirby, 1889*Diplacodes* Kirby, 1889, Trans. Zool. Soc. London 12: 263, 307.**Diplacodes bipunctata** (Brauer, 1865)*Libellula (Diplax) bipunctata* Brauer, 1865, Verh. zool.-bot. Ges. Wien 15: 503.

Order PLECOPTERA

Suborder ARCHIPERLARIA Illies, 1960

Superfamily EUSTHENIOIDEA Tillyard, 1926

Family EUSTHENIIDAE Tillyard, 1921

Subfamily STENOPERLINAE Tillyard, 1921

Genus **Stenoperla** McLachlan, 1866*Stenoperla* McLachlan, 1866, Trans. Ent. Soc. London (3) 5: 354.**Stenoperla prasina** (Newman, 1845)*Chloroperla prasina* Newman, 1845, Zoologist 3: 852.

Suborder FILIPALPIA

Family AUSTROPERLIDAE Tillyard, 1921

Genus **Austroperla** Needham, 1905*Austroperla* Needham, 1905, Proc. Biol. Soc. Washington 18: 109.**Austroperla cyrene** (Newman, 1845)*Chloroperla cyrene* Newman, 1845, Zoologist 3: 853.

Family GRIPOPTERYGIDAE Enderlein, 1909

Subfamily GRIPOPTERYGINAE Enderlein, 1909

Genus **Megaleptoperla** Tillyard, 1923*Megaleptoperla* Tillyard, 1923, Trans. Proc. N.Z. Inst. 54: 204.**Megaleptoperla grandis** (Hudson, 1913)*Leptoperla grandis* Hudson, 1913, Trans. Proc. N.Z. Inst. 45: 51.

Megaleptoperla diminuta Kimmins, 1938*Megaleptoperla diminuta* Kimmins, 1938, Ann. Mag. Nat. Hist. (11) 2: 568.

Subfamily LEPTOPERLINAE Banks, 1913

Genus **Aucklandobius** Enderlein, 1909*Aucklandobius* Enderlein, 1909, Dt. ent. Z. 1909: 680.**Aucklandobius complementarius** Enderlein, 1909 Auckland Is, Campbell I*Aucklandobius complementarius* Enderlein, 1909, Dt. ent. Z. 1909: 679.**Aucklandobius fulvescens** (Hare, 1910)*Leptoperla fulvescens* Hare, 1910, Trans. N.Z. Inst. 42: 29.**Aucklandobius howesi** (Tillyard, 1923)*Nesoperla howesi* Tillyard, 1923, Trans. Proc. N.Z. Inst. 54: 209.**Aucklandobius spiniger** (Tillyard, 1923)*Nesoperla spiniger* Tillyard, 1923, Trans. Proc. N.Z. Inst. 54: 210.**Aucklandobius trivacuatus** (Tillyard, 1923)*Nesoperla trivacuata* Tillyard, 1923, Trans. Proc. N.Z. Inst. 54: 211.**Aucklandobius flavescens** (Kimmins, 1938)*Nesoperla flavescens* Kimmins, 1938, Ann. Mag. Nat. Hist. (11) 2: 570.Genus **Zelandoperla** Tillyard, 1923*Zelandoperla* Tillyard, 1923, Trans. Proc. N.Z. Inst. 54: 212.**Zelandoperla decorata** Tillyard, 1923*Zelandoperla decorata* Tillyard, 1923, Trans. Proc. N.Z. Inst. 54: 212.**Zelandoperla maculata** (Hare, 1910)*Leptoperla maculata* Hare, 1910, Trans. N.Z. Inst. 42: 29.**Zelandoperla fenestrata fenestrata** Tillyard, 1923*Zelandoperla fenestrata* Tillyard, 1923, Trans. Proc. N.Z. Inst. 54: 214.**Zelandoperla fenestrata pennulata** McLellan, 1967*Zelandoperla fenestrata pennulata* McLellan, 1967, Trans. R. Soc. N.Z. Zool. 9 (1): 9.**Zelandoperla agnetis** McLellan, 1967*Zelandoperla agnetis* McLellan, 1967, Trans. R. Soc. N.Z. Zool. 9 (1): 1.**Zelandoperla denticulata** McLellan, 1967*Zelandoperla denticulata* McLellan, 1967, Trans. R. Soc. N.Z. Zool. 9 (1): 5.Genus **Vesicaperla** McLellan, 1967*Vesicaperla* McLellan, 1967, Trans. R. Soc. N.Z. Zool. 9 (1): 11.**Vesicaperla substirpes** McLellan, 1967*Vesicaperla substirpes* McLellan, 1967, Trans. R. Soc. N.Z. Zool. 9 (1): 11.Genus **Apteryoperla** Wisely, 1953*Apteryoperla* Wisely, 1953, Rec. Canterbury Mus. 6 (3): 220.**Apteryoperla monticola** Wisely, 1953*Apteryoperla monticola* Wisely, 1953, Rec. Canterbury Mus. 6 (3): 220.**Apteryoperla angularis** Wiseley, 1953*Apteryoperla angularis* Wisely, 1953, Rec. Canterbury Mus. 6 (3): 227.**Apteryoperla turbotti** Illies, 1963*Apteryoperla turbotti* Illies, 1963, Rec. Dominion Mus. 4 (19): 261.**Apteryoperla campbelli** Illies, 1963*Apteryoperla campbelli* Illies, 1963, Rec. Dominion Mus. 4 (19): 264.**Apteryoperla longicauda** Illies, 1963*Apteryoperla longicauda* Illies, 1963, Rec. Dominion Mus. 4 (19): 265.

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Campbell I

Campbell I

Subfamily ANTARCTOPERLINAE Enderlein, 1909

Genus **Zelandobius** Tillyard, 1921

Zelandobius Tillyard, 1921, Can. Ent. 53: 43.

Zelandobius confusus (Hare, 1910)

Leptoperla confusa Hare, 1910, Trans. N.Z. Inst. 42: 29.

Zelandobius hudsoni (Hare, 1910)

Leptoperla hudsoni Hare, 1910, Trans. N.Z. Inst. 42: 30.

Zelandobius furcillatus Tillyard, 1923

Zelandobius furcillatus Tillyard, 1923, Trans. Proc. N.Z. Inst. 54: 207.

Zelandobius unicolor Tillyard, 1923

Zelandobius unicolor Tillyard, 1923, Trans. Proc. N.Z. Inst. 54: 208.

Zelandobius illiesi McLellan, 1969

Zelandobius illiesi McLellan, 1969, Trans. R. Soc. N.Z. Biol. Sci. 11 (3): 36.

Family NOTONEMOURIDAE Ricker, 1950

Genus **Notonemoura** Tillyard, 1923

Notonemoura Tillyard, 1923, Trans. Proc. N.Z. Inst. 54: 215.

Notonemoura latipennis latipennis Tillyard, 1923

Notonemoura latipennis Tillyard, 1923, Trans. Proc. N.Z. Inst. 54: 215.

Notonemoura latipennis paludis McLellan, 1968

Notonemoura latipennis paludis McLellan, 1968, Trans. R. Soc. N.Z. Zool., 10 (14): 137.

Notonemoura alisteri McLellan, 1968

Notonemoura alisteri McLellan, 1968, Trans. R. Soc. N.Z. Zool. 10 (14): 137.

Genus **Halticoperla** McLellan & Winterbourn, 1968

Halticoperla McLellan & Winterbourn, 1968, Trans. R. Soc. N.Z. Zool. 10 (13): 127.

Halticoperla viridans McLellan & Winterbourn, 1968

Halticoperla viridans McLellan & Winterbourn, 1968, Trans. R. Soc. N.Z. Zool. 10 (13): 127.

Genus **Spaniocerca** Tillyard, 1923

Spaniocerca Tillyard, 1923, Trans. Proc. N.Z. Inst. 54: 217.

Spaniocerca zelandica Tillyard, 1923

Spaniocerca zelandica Tillyard, 1923, Trans. Proc. N.Z. Inst. 54: 216.

Genus **Spaniocercoides** Kimmins, 1938

Spaniocercoides Kimmins, 1938, Ann. Mag. Nat. Hist. (11) 2: 576.

Spaniocercoides hudsoni Kimmins, 1938

Spaniocercoides hudsoni Kimmins, 1938, Ann. Mag. Nat. Hist. (11) 2: 577.

Spaniocercoides cowleyi (Winterbourn, 1965)

Notonemoura cowleyi Winterbourn, 1965, N.Z. J. Sci. 8 (3): 278.

Genus **Cristaperla** McLellan, 1973

Cristaperla McLellan, 1973, N.Z. J. Mar. Freshwat. Res. 6 (4): 475.

Cristaperla fimbria (Winterbourn, 1965)

Spaniocercoides fimbria Winterbourn, 1965, N.Z. J. Sci. 8 (3): 280.

Genus **Omanuperla** McLellan, 1973

Omanuperla McLellan, 1973, N.Z. J. Mar. Freshwat. Res. 6 (4): 478.

Omanuperla bruningi McLellan, 1973

Omanuperla bruningi McLellan, 1973, N.Z. J. Mar. Freshwat. Res. 6 (4): 478.

*Species dubiae***Gripopteryx zealandica** Sámal, 1921*Gripopteryx zealandica* Sámal, 1921, Cas. csl. Spol. ent. 18 (1, 2): 20. 18 (3, 4): 68.**Order HEMIPTERA**

Suborder HETEROPTERA

Superfamily SALDOIDEA

Family SALDIDAE

Genus **Saldula** Van Duzee, 1914*Saldula* Van Duzee, 1914, Can. Ent. 46: 387.**Saldula australis** (White, 1876)*Salda australis* White, 1876, Ent. Mon. Mag. 13: 106.**Saldula butleri** (White, 1878)*Salda butleri* White, 1878, Ent. Mon. Mag. 15: 160.**Saldula laelaps** (White, 1878)*Salda laelaps* White, 1878, Ent. Mon. Mag. 15: 160.**Saldula stoneri** Drake & Hoberlandt, 1950*Saldula stoneri* Drake & Hoberlandt, 1950, Acta. Ent. Mus. Nat. Pragae 26 (374): 1.**Saldula parvula** Cobben, 1961*Saldula parvula* Cobben, 1961, Ent. Ber., Amsterdam, 21: 101.**Saldula trivialis** Cobben, 1961*Saldula trivialis* Cobben, 1961, Ent. Ber., Amsterdam, 21: 102.**Saldula maculipennis** Cobben, 1961*Saldula maculipennis* Cobben, 1961, Ent. Ber., Amsterdam, 21: 104.

Superfamily GERROIDEA

Family GERRIDAE

Genus **Halobates** Eschscholtz, 1822*Halobates* Eschscholtz, 1822, Entomographien 1 (1): 106.**Halobates sericeus** Eschscholtz, 1822

Kermadec Is

Halobates sericeus Eschscholtz, 1822, Entomographien 1 (1): 108.

Family VELIIDAE

Genus **Microvelia** Westwood, 1834*Microvelia* Westwood, 1834, Anns. Soc. ent. Fr. 3: 647.**Microvelia macgregori** (Kirkaldy, 1899)*Hydroessa macgregori* Kirkaldy, 1899, Revue ent., Caen 18: 91.**Microvelia halei** Esaki, 1928*Microvelia halei* Esaki, 1928, Insects Samoa 2 (2): 69.

Family HYDROMETRIDAE

Genus **Hydrometra** Latreille, 1796*Hydrometra* Latreille, 1796, Préc. Car. Ins., 86.**Hydrometra ribesci** Hungerford, 1938*Hydrometra ribesci* Hungerford, 1938, Pan-Pacific Ent. 14: 76.

Superfamily NOTONECTOIDEA

Family NOTONECTIDAE

Genus **Anisops** Spinola, 1837*Anisops* Spinola, 1837, Ess. Ins. Hémipt., 58.**Anisops wakefieldi** White, 1878

NZ, Chatham Is

Anisops wakefieldi White, 1878, Ent. Mon. Mag. 15: 161.

Anisops assimilis White, 1878

Anisops assimilis White, 1878, Ent. Mon. Mag. 15: 161.

Superfamily CORIXOIDEA

Family CORIXIDAE

Subfamily CORIXINAE

Genus **Sigara** Fabricius, 1775

Sigara Fabricius, 1775, Syst. Ent., 691.

Subgenus **Tropocorixa** Hutchinson, 1940

Tropocorixa Hutchinson, 1940, Trans. Connecticut Acad. Arts Sci. 33: 413.

Sigara (Tropocorixa) arguta (White, 1878)

Corixa arguta White, 1878, Ent. Mon. Mag. 15: 161.

Sigara (Tropocorixa) potamius Young, 1962

Sigara (Tropocorixa) potamius Young, 1962, Rec. Canterbury Mus. 7 (5): 337.

Sigara (Tropocorixa) limnochares Young, 1962

Sigara (Tropocorixa) limnochares Young, 1962, Rec. Canterbury Mus. 7 (5): 342.

Sigara (Tropocorixa) infrequens Young, 1962

Sigara (Tropocorixa) infrequens Young, 1962, Rec. Canterbury Mus. 7 (5): 346.

Sigara (Tropocorixa) uruana Young, 1962

Sigara (Tropocorixa) uruana Young, 1962, Rec. Canterbury Mus. 7 (5): 350.

Subfamily DIAPREOCORINAE Lundblad

Genus **Diaprepocoris** Kirkaldy, 1897

Diaprepocoris Kirkaldy, 1897, Ann. Mag. Nat. Hist. (6) 20: 52.

Diaprepocoris zealandiae Hale, 1924

Diaprepocoris zealandiae Hale, 1924, Trans. R. Soc. S. Aust. 48: 9.

Order MEGALOPTERA

Family CORYDALIDAE

Subfamily CHAULIODINAE

Tribe CHAULIODINI van der Weele, 1909

Genus **Archichauliodes** van der Weele, 1909

Archichauliodes van der Weele, 1909, Notes Leyden Mus. 30 (4): 258.

Archichauliodes diversus (Walker, 1853)

Hermes diversus Walker, 1853, List neuropterous insects Br. Mus. Part 2: 205.

Order COLEOPTERA

Suborder ADEPHAGA

Superfamily CARABOIDEA

Family DYTISCIDAE Leach, 1815

Subfamily HYDROPORINAE Régimbart, 1879

Tribe BIDESSINI Sharp 1882

Genus **Liodesus** Guignot, 1939

Liodesus Guignot, 1939, Bull. Soc. Nat. Vaucluse: 53.

Liodesus plicatus (Sharp, 1882)

Bidessus plicatus Sharp, 1882, Sci. Trans. R. Dublin Soc. (2) 2: 360.

Liodessus deflectus Ordish, 1966

Liodessus deflectus Ordish, 1966, Rec. Dominion Mus. 5 (22): 229.

Liodessus oliveri Ordish, 1966

Liodessus oliveri Ordish, 1966, Rec. Dominion Mus. 5 (22): 230.

Kermadec Is

Genus **Huxelhydrus** Sharp, 1882

Huxelhydrus Sharp, 1882, Sci. Trans. R. Dublin Soc. (2) 2: 369.

Huxelhydrus syntheticus Sharp, 1882

Huxelhydrus syntheticus Sharp, 1882, Sci. Trans. R. Dublin Soc. (2) 2: 369.

Tribe HYPHYDRINI Sharp, 1882

Genus **Hyphyrus** Illiger, 1802

Hyphyrus Illiger, 1802, Mag. Insektenk. 1: 299.

Subgenus **Apriophorus** Guignot, 1959

Hyphyrus (Apriophorus) Guignot, 1959, Anns. Mus. r. Congo belge: 70.

Hyphyrus (Apriophorus) elegans (Montrouzier, 1860)

Pachetes elegans Montrouzier, 1860, Anns. Soc. ent. Fr.: 245.

Tribe HYDROPORINI Sharp, 1882

Genus **Antiporus** Sharp, 1882

Antiporus Sharp, 1882, Sci. Trans. R. Dublin Soc. (2) 2: 410.

Antiporus strigosulus (Broun, 1880)

Hydroporus strigosulus Broun, 1880, Manual N.Z. Coleoptera 1: 72.

Antiporus wakefieldi (Sharp, 1876)

Hydroporus wakefieldi Sharp, 1876, Ent. Mon. Mag. 13: 20.

Subfamily COLYMBETINAE

Tribe COPELATINI Régimbart, 1895

Genus **Copelatus** Erichson, 1832

Copelatus Erichson, 1832, Gen. Dytic., 38.

Copelatus australis (Clark, 1863)

Celina australis Clark, 1863, J. Ent. 2: 14.

Tribe COLYMBETINI Régimbart, 1895

Genus **Lancetes** Sharp, 1882

Lancetes Sharp, 1882, Sci. Trans. R. Dublin Soc. (2) 2: 897.

Lancetes lanceolatus (Clark, 1863)

Colymbetes lanceolatus Clark, 1863, J. Ent. 2: 16.

Genus **Rhantus** Lacordaire, 1835

Rhantus Lacordaire, 1835, In Boissduval & Lacordaire, Faune ent. Paris 1: 309.

Rhantus pulverosus (Stephens, 1828)

NZ, Kermadec Is, Chatham Is

Colymbetes pulverosus Stephens, 1828, Illustrations British Ent. Mandibulata 2: 69.

Rhantus plantaris Sharp, 1882

Rhantus plantaris Sharp, 1882, Sci. Trans. R. Dublin Soc. (2) 2: 608.

Subfamily DYTISCINAE Bedel, 1881

Tribe DYTISCINI Sharp

Genus **Dytiscus** Linnaeus, 1758

Dytiscus Linnaeus, 1758, Syst. Nat. Ed. 10: 411.

Dytiscus semisulcatus Muller, 1776

Dytiscus semisulcatus Muller, 1776, Zool. Dan. Prodr., 70.

Tribe CYBISTERINI Sharp, 1882

Genus **Homoeodytes** Régimbart, 1879*Homoeodytes* Régimbart, 1879, Anns. Soc. ent. Fr. (5) 8: 458.**Homoeodytes hookeri** (White, 1846)*Cybister hookeri* White, 1846, Zool. Voy. Erebus & Terror 2 Insects: 6.**Homoeodytes scutellaris** (Germar, 1824)*Cybister scutellaris* Germar, 1824, Linn. Ent. 3: 171.

Family GYRINIDAE Leach, 1815

Genus **Gyrinus** Linnaeus, 1767*Gyrinus* Linnaeus, 1767, Syst. Nat. Ed. 12: 567.**Gyrinus convexiusculus** Macleay, 1871*Gyrinus convexiusculus* Macleay, 1871, Trans. Ent. Soc. N.S.W. 2 (2, 3): 128.

Suborder POLYPHAGA

Superfamily HYDROPHILOIDEA

Family HYDRAENIDAE

Genus **Orchymontia** Broun, 1919*Orchymontia* Broun, 1919, Anns. Soc. ent. Belg. 59: 108.**Orchymontia spinipennis** Broun, 1919*Orchymontia spinipennis* Broun, 1919, Anns. Soc. ent. Belg. 59: 108.

Family HYDROPHILIDAE Latreille [1802]

Subfamily SPHAERIDIINAE Latreille [1802]

Genus **Stygnohydrus** Broun, 1893*Stygnohydrus* Broun, 1893, Manual N.Z. Coleoptera 6: 1336.**Stygnohydrus femoralis** Broun, 1910*Stygnohydrus femoralis* Broun, 1910, Bull. N.Z. Inst. 1: 12.

Subfamily HYDROPHILINAE

Genus **Limnoxenus** Motschoulsky, 1853*Limnoxenus* Motschoulsky, 1853, Hydrocanthares de la Russie, 10.**Limnoxenus zealandicus** (Broun, 1880)*Hydrobius zealandicus* Broun, 1880, Manual N.Z. Coleoptera: 77.Genus **Laccobius** Erichson, 1837*Laccobius* Erichson, 1837, Käfer Mark Brand. 1 (1): 202.**Laccobius arrowi** d'Orchymont, 1925*Laccobius arrowi* d'Orchymont, 1925, Bull. Anns. Soc. ent. Belg. 65: 68.**Laccobius mineralis** Winterbourn, 1970*Laccobius mineralis* Winterbourn, 1970, Trans. R. Soc. N.Z. Biol. Sci. 12 (4): 25.Genus **Enochrus** Thomson, 1859*Enochrus* Thomson, 1859, Skand. Coleopt. 1: 18.**Enochrus tritus** (Broun, 1880)*Philhydrus tritus* Broun, 1880, Manual N.Z. Coleoptera 1: 78.

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Genus **Berosus** Leach, 1817*Berosus* Leach, 1817, Zool. Miscell. 3: 92.

Subgenus **Phelerosus** Sharp, 1884*Phelerosus* Sharp, 1884, Trans. Ent. Soc. London 1884: 480.**Berosus (Phelerosus) pallidipennis** (Sharp, 1884)*Phelerosus pallidipennis* Sharp, 1884, Trans. Ent. Soc. London 1884: 480.Genus **Paracymus** Thomson, 1867*Paracymus* Thomson, 1867, Skand. Coleopt. 9: 120.**Paracymus pygmaeus** (Macleay, 1871)*Cyclonotum pygmaeum* Macleay, 1871, Trans. Ent. Soc. N.S.W. 2 (2, 3): 133.Genus **Anacaena** Thomson, 1859*Anacaena* Thomson, 1859, Skand. Coleopt. 1: 18.**Anacaena tepida** Winterbourn, 1970*Anacaena tepida* Winterbourn, 1970, Trans. R. Soc. N.Z. Biol. Sci. 12 (4): 27.

Superfamily EUCINETOIDEA

Family HELODIDAE

Superfamily DRYOPOIDEA

Family ELMIDAE Shuckard, 1839

Genus **Hydora** Broun, 1882*Hydora* Broun, 1882, Ann. Mag. Nat. Hist. (5) 9: 409.**Hydora lanigera** Broun, 1914*Hydora lanigera* Broun, 1914, Bull. N.Z. Inst. 1 (3): 154.**Hydora nitida** Broun, 1885*Hydora nitida* Broun, 1885, N.Z. J. Sci. 2 (8): 385.**Hydora obsoleta** Broun, 1885*Hydora obsoleta* Broun, 1885, N.Z. J. Sci. 2 (8): 385.**Hydora picea** (Broun, 1881)*Pachycephala piceum* Broun, 1881, Manual N.Z. Coleoptera 2: 672.**Hydora subaenea** Broun, 1914*Hydora subaenea* Broun, 1914, Bull. N.Z. Inst. 1 (3): 154.**Hydora vestita** Broun, 1914*Hydora vestita* Broun, 1914, Bull. N.Z. Inst. 1 (3): 153.

Superfamily CURCULIONOIDEA

Family CURCULIONIDAE

Subfamily RHYPAROSOMINAE

Genus **Desiantha** Pascoe, 1870*Desiantha* Pascoe, 1870, Trans. Ent. Soc. London 1870: 193.**Desiantha ascita** (Pascoe, 1876)*Brexius ascitus* Pascoe, 1876, Ann. Mag. Nat. Hist. (4) 18: 59.**Order MECOPTERA**

Suborder EUMECOPTERA

Family NANNOCHORISTIDAE Tillyard, 1917

Genus **Choristella** Tillyard, 1917*Choristella* Tillyard, 1917, Proc. Linn. Soc. N.S.W. 42: 298.**Choristella philpotti** Tillyard, 1917*Choristella philpotti* Tillyard, 1917, Proc. Linn. Soc. N.S.W. 42: 299.

Order DIPTERA

Suborder NEMATOCERA

Division TIPULOMORPHA

Family TIPULIDAE

Genus **Limonia** Meigen, 1803*Limonia* Meigen, 1803, *In Illiger, Mag. Insektenk.* 2: 262.Subgenus **Idioglochina** Alexander, 1921*Idioglochina* Alexander, 1921, *Can. Ent.* 53: 207.**Limonia (Idioglochina) fumipennis** (Butler, 1875)*Limnobia fumipennis* Butler, 1875, *Cist. Ent.* 1: 355.**Limonia (Idioglochina) allani** Alexander, 1959*Limonia (Idioglochina) allani* Alexander, 1959, *Ann. Mag. Nat. Hist.* (13) 1 (10): 674.**Limonia (Idioglochina) kronei** (Mik, 1881)

Auckland Is, Campbell I

Dicranomyia kronei Mik 1881, *Verh. zool.-bot. Ges. Wien* 31: 199.Subgenus **Dicranomyia** Stephens, 1829*Dicranomyia* Stephens, 1829, *Syst. Cat. Brit. Ins.* 2: 243.**Limonia (Dicranomyia) gracilis** (Edwards, 1923)

NZ, Chatham Is

Dicranomyia gracilis Edwards, 1923, *Trans. Proc. N.Z. Inst.* 54: 283.**Limonia (Dicranomyia) subviridis** (Alexander, 1922)*Dicranomyia subviridis* Alexander, 1922, *Ann. Ent. Soc. Am.* 15: 223.**Limonia (Dicranomyia) wiseana** Alexander, 1955*Limonia (Dicranomyia) wiseana* Alexander, 1955, *Ann. Mag. Nat. Hist.* (12) 8: 669.

Division PSYCHODOMORPHA

Family PSYCHODIDAE

Genus **Psychoda** Latreille, 1796*Psychoda* Latreille, 1796, *Préc. Car. Ins.*, 152.**Psychoda alternata** Say, 1824*Psychoda alternata* Say, 1824, *Narrative exped. source St. Peter's River* 2: 358.

Division CULICOMORPHA

Family CULICIDAE

Subfamily DIXINAE

Tribe DIXINI

Genus **Neodixa** Tonnoir, 1925*Neodixa* Tonnoir, 1925, *Rec. Canterbury Mus.* 2 (5): 311.**Neodixa minuta** (Tonnoir, 1924)*Dixella minuta* Tonnoir, 1924, *Rec. Canterbury Mus.* 2 (4): 230.Genus **Nothodixa** Edwards, 1930*Dixa (Nothodixa)* Edwards, 1930, *Diptera Patagonia & S. Chile* 2 (3): 101.**Nothodixa campbelli** (Alexander, 1922)*Dixa campbelli* Alexander, 1922, *Insecutor Inscit. menstr.* 10: 20.**Nothodixa philpotti** (Tonnoir, 1924)*Dixa philpotti* Tonnoir, 1924, *Rec. Canterbury Mus.* 2 (4): 227.**Nothodixa otagensis** (Alexander, 1922)*Dixa otagensis* Alexander, 1922, *Insecutor Inscit. menstr.* 10: 147.**Nothodixa septentrionalis** (Tonnoir, 1924)*Dixa septentrionalis* Tonnoir, 1924, *Rec. Canterbury Mus.* 2 (4): 226.

Tribe PARADIXINI

Genus **Paradixa** Tonnoir, 1924

Dixa (Paradixa) Tonnoir, 1924, Rec. Canterbury Mus. 2 (4): 222.

Paradixa neozelandica (Tonnoir, 1924)

Dixa neozelandica Tonnoir, 1924, Rec. Canterbury Mus. 2 (4): 228.

Paradixa fuscinervis (Tonnoir, 1924)

Dixa fuscinervis Tonnoir, 1924, Rec. Canterbury Mus. 2 (4): 229.

Paradixa tonnoiri Belkin, 1968

Paradixa tonnoiri Belkin, 1968, Contr. Am. Ent. Inst. 3 (1): 44.

Paradixa harrisi (Tonnoir, 1925)

Dixa harrisi Tonnoir, 1925, Rec. Canterbury Mus. 2 (5): 311.

Subfamily CULICINAE

Tribe CULICINI

Genus **Culex** Linnaeus, 1758

Culex Linnaeus, 1758, Syst. Nat. Ed. 10: 602.

Subgenus **Culex**

Culex (Culex) pervigilans Bergroth, 1889

Culex pervigilans Bergroth, 1889, Wiener ent. Ztg. 8: 295.

Culex (Culex) rotoruae Belkin, 1968

Culex (Culex) rotoruae Belkin, 1968, Contr. Am. Ent. Inst. 3 (1): 64.

Culex (Culex) asteliae Belkin, 1968

Culex (Culex) asteliae Belkin, 1968, Contr. Am. Ent. Inst. 3 (1): 66.

Culex (Culex) quinquefasciatus Say, 1823

Culex 5-fasciatus Say, 1823, J. Acad. Nat. Sci. Philadelphia 3: 10.

Tribe CULISETINI

Genus **Culiseta** Felt, 1904

Culiseta Felt, 1904, Bull. New York St. Mus. 79: 391.

Subgenus **Climacura** Howard, Dyar & Knab, 1915

Climacura Howard, Dyar & Knab, 1915, Pubs. Carnegie Instn. 159 (3): 452.

Culiseta (Climacura) tonnoiri (Edwards, 1925)

Theobaldia tonnoiri Edwards, 1925, Bull. Ent. Res. 15 (3): 258.

Culiseta (Climacura) novaezealandiae Pillai, 1966

Culiseta (Climacura) novaezealandiae Pillai, 1966, Trans. R. Soc. N.Z. Zool. 8 (11): 125.

Tribe MANSONIINI

Genus **Coquillettidia** Dyar, 1905

Coquillettidia Dyar, 1905, Proc. Ent. Soc. Washington 7: 47.

Subgenus **Austromansonia** Belkin, 1968

Coquillettidia (Austromansonia) Belkin, 1968, Contr. Am. Ent. Inst. 3 (1): 76.

Coquillettidia (Austromansonia) tenuipalpis (Edwards, 1924)

Taeniorhynchus (Coquillettidia) tenuipalpis Edwards, 1924, Bull. Ent. Res. 14 (4): 366.

Subgenus **Coquillettidia**

Coquillettidia (Coquillettidia) iracunda (Walker, 1848)

Culex iracundus Walker, 1848, List dipterous insects Br. Mus. Part 1: 6.

Tribe AEDINI

Genus **Opifex** Hutton, 1902

Opifex Hutton, 1902, Trans. Proc. N.Z. Inst. 34: 188.

Opifex fuscus Hutton, 1902

Opifex fuscus Hutton, 1902, Trans. Proc. N.Z. Inst. 34: 188.

Genus **Aedes** Meigen, 1818

Aedes Meigen, 1818, Syst. Besch. Zweifl. Insekt. 1: 13.

Subgenus **Nothoskusea** Dumbleton, 1962

Aedes (Nothoskusea) Dumbleton, 1962, N.Z.J. Sci. 5: 20.

Aedes (Nothoskusea) chathamicus Dumbleton, 1962

Chatham Is

Aedes (Nothoskusea) chathamicus Dumbleton, 1962, N.Z. J. Sci. 5: 20.

Subgenus **Halaedes** Belkin, 1962

Aedes (Halaedes) Belkin, 1962, Mosquitoes S. Pacific 1: 328.

Aedes (Halaedes) australis (Erichson, 1842)

Culex australis Erichson, 1842, Arch. Naturgesch. 8 (1): 270.

Subgenus **Ochlerotatus** Lynch Arribálzaga, 1891

Ochlerotatus Lynch Arribálzaga, 1891, Revta. Mus. La Plata 1: 374.

Aedes (Ochlerotatus) antipodeus (Edwards, 1920)

Ochlerotatus antipodeus Edwards, 1920, Bull. Ent. Res. 10: 132.

Aedes (Ochlerotatus) subalbirostris Klein & Marks, 1960

Aedes (Ochlerotatus) subalbirostris Klein & Marks, 1960, Proc. Linn. Soc. N.S.W. 85: 115.

Subgenus **Finlaya** Theobald, 1903

Finlaya Theobald, 1903, Monograph Culicidae 3: 281.

Aedes (Finlaya) notoscriptus (Skuse, 1889)

Culex notoscriptus Skuse, 1889, Proc. Linn. Soc. N.S.W. 2 (3): 1738.

Tribe SABETHINI

Genus **Maorigoeldia** Edwards, 1930

Rachionotomyia (Maorigoeldia) Edwards, 1930, Bull. Ent. Res. 21: 302.

Maorigoeldia argyropus (Walker, 1848)

Culex argyropus Walker, 1848, List dipterous insects Br. Mus. Part 1: 2.

Subfamily CHAEBORINAE

Tribe CORETHRELLINI

Genus **Corethrella** Coquillett, 1902

Corethrella Coquillett, 1902, J. New York Ent. Soc. 10: 191.

Subgenus **Notocorethrella** Belkin, 1968

Corethrella (Notocorethrella) Belkin, 1968, Contr. Am. Ent. Inst. 3 (1): 110.

Corethrella (Notocorethrella) novaezealandiae Tonnoir, 1927

Corethrella novae-zealandiae Tonnoir, 1927, Rec. Canterbury Mus. 3 (2): 107.

Family CHIRONOMIDAE

Subfamily TANYPODINAE

Genus **Pentaneura** Phillipi, 1865

Pentaneura Phillipi, 1865, Verh. zool.-bot. Ges. Wien 15: 629.

Pentaneura harrisi Freeman, 1959

Pentaneura (Pentaneura) harrisi Freeman, 1959, Bull. Br. Mus. Nat. Hist. Ent. 7 (9): 400.

Genus **Ablabesmyia** Johannsen, 1905

Ablabesmyia Johannsen, 1905, Bull. New York St. Mus. 86: 135.

Ablabesmyia malus (Hutton, 1902)

Tanypus malus Hutton, 1902, Trans. Proc. N.Z. Inst. 34: 187.

Genus **Anatopynia** Johannsen, 1905

Anatopynia Johannsen, 1905, Bull. New York St. Mus. 86: 135.

Anatopynia antarctica (Hudson, 1892)

Corethra antarctica Hudson, 1892, Manual N.Z. Entomology, 43.

Anatopynia apicincta Freeman, 1959

Anatopynia apicincta Freeman, 1959, Bull. Br. Mus. Nat. Hist. Ent. 7 (9): 403.

Anatopynia languidus (Hutton, 1902)

Tanypus languidus Hutton, 1902, Trans. Proc. N.Z. Inst. 34: 186.

Anatopynia debilis (Hutton, 1902)

Tanypus debilis Hutton, 1902, Trans. Proc. N.Z. Inst. 34: 186.

Anatopynia quinquepunctata Freeman, 1959

Anatopynia quinquepunctata Freeman, 1959, Bull. Br. Mus. Nat. Hist. Ent. 7 (9): 405.

Anatopynia flavipes Freeman, 1959

Anatopynia flavipes Freeman, 1959, Bull. Br. Mus. Nat. Hist. Ent. 7 (9): 405.

Anatopynia apicinella Freeman, 1959

Anatopynia apicinella Freeman, 1959, Bull. Br. Mus. Nat. Hist. Ent. 7 (9): 406.

Anatopynia umbrosa Freeman, 1959

Anatopynia umbrosa Freeman, 1959, Bull. Br. Mus. Nat. Hist. Ent. 7 (9): 406.

Anatopynia quadricincta Freeman, 1959

Anatopynia quadricincta Freeman, 1959, Bull. Br. Mus. Nat. Hist. Ent. 7 (9): 407.

Anatopynia cana Freeman, 1959

Anatopynia cana Freeman, 1959, Bull. Br. Mus. Nat. Hist. Ent. 7 (9): 408.

Subfamily PODONOMINAE

Tribe PODONOMINI

Genus **Zelandochlus** Brundin, 1966

Zelandochlus Brundin, 1966, Kungl. Sv. Vet. Akad. Handl. (4) 11 (1): 106.

Zelandochlus latipalpis Brundin, 1966

Zelandochlus latipalpis Brundin, 1966, Kungl. Sv. Vet. Akad. Handl. (4) 11 (1): 107.

Genus **Parochlus** Enderlein, 1912

Parochlus Enderlein, 1912, Kungl. Sv. Vet. Akad. Handl. 48 (3): 109.

Parochlus conjungens Brundin, 1966

Parochlus conjungens Brundin, 1966, Kungl. Sv. Vet. Akad. Handl. (4) 11 (1): 128.

Parochlus aotearoae Brundin, 1966

Parochlus aotearoae Brundin, 1966, Kungl. Sv. Vet. Akad. Handl. (4) 11 (1): 138.

Parochlus spinosus Brundin, 1966

Parochlus spinosus Brundin, 1966, Kungl. Sv. Vet. Akad. Handl. (4) 11 (1): 138.

Parochlus maorii Brundin, 1966

Parochlus maorii Brundin, 1966, Kungl. Sv. Vet. Akad. Handl. (4) 11 (1): 144.

Parochlus ohakunensis (Freeman, 1959)

Podonomus ohakunensis Freeman, 1959, Bull. Br. Mus. Nat. Hist. Ent. 7 (9): 409.

Parochlus carinatus Brundin, 1966

Parochlus carinatus Brundin, 1966, Kungl. Sv. Vet. Akad. Handl. (4) 11 (1): 151.

Parochlus pauperatus Brundin, 1966

Parochlus pauperatus Brundin, 1966, Kungl. Sv. Vet. Akad. Handl. (4) 11 (1): 153.

Parochlus novaezelandiae Brundin, 1966*Parochlus novaezelandiae* Brundin, 1966, Kungl. Sv. Vet. Akad. Handl. (4) 11 (1): 154.**Parochlus longicornis** Brundin, 1966*Parochlus longicornis* Brundin, 1966, Kungl. Sv. Vet. Akad. Handl. (4) 11 (1): 155.**Parochlus glacialis** Brundin, 1966*Parochlus glacialis* Brundin, 1966, Kungl. Sv. Vet. Akad. Handl. (4) 11 (1): 155.Genus **Podonomus** Phillipi, 1865*Podonomus* Phillipi, 1865, Verh. zool.-bot. Ges. Wien 15: 601.**Podonomus parochloides** Brundin, 1966*Podonomus parochloides* Brundin, 1966, Kungl. Sv. Vet. Akad. Handl. (4) 11 (1): 199.**Podonomus waikukupae** Brundin, 1966*Podonomus waikukupae* Brundin, 1966, Kungl. Sv. Vet. Akad. Handl. (4) 11 (1): 200.**Podonomus pygmaeus** Brundin, 1966*Podonomus pygmaeus* Brundin, 1966, Kungl. Sv. Vet. Akad. Handl. (4) 11 (1): 200.Genus **Podochlus** Brundin, 1966*Podochlus* Brundin, 1966, Kungl. Sv. Vet. Akad. Handl. (4) 11 (1): 240.**Podochlus grandis** Brundin, 1966*Podochlus grandis* Brundin, 1966, Kungl. Sv. Vet. Akad. Handl. (4) 11 (1): 248.**Podochlus stouti** Brundin, 1966*Podochlus stouti* Brundin, 1966, Kungl. Sv. Vet. Akad. Handl. (4) 11 (1): 250.**Podochlus cockaynei** Brundin, 1966*Podochlus cockaynei* Brundin, 1966, Kungl. Sv. Vet. Akad. Handl. (4) 11 (1): 252.**Podochlus knoxi** Brundin, 1966*Podochlus knoxi* Brundin, 1966, Kungl. Sv. Vet. Akad. Handl. (4) 11 (1): 253.

Subfamily DIAMESINAE (sensu Brundin, 1966)

Tribe HEPTAGYINI (sensu Brundin, 1966)

Genus **Maoridiamesa** Pagast, 1947*Maoridiamesa* Pagast, 1941, Arch. Hydrobiol. 41: 448.**Maoridiamesa harrisi** Pagast, 1947*Maoridiamesa harrisi* Pagast, 1947, Arch. Hydrobiol. 41: 448.**Maoridiamesa intermedia** Brundin, 1966*Maoridiamesa intermedia* Brundin, 1966, Kungl. Sv. Vet. Akad. Handl. (4) 11 (1): 411.**Maoridiamesa stouti** Brundin, 1966*Maoridiamesa stouti* Brundin, 1966, Kungl. Sv. Vet. Akad. Handl. (4) 11 (1): 412.**Maoridiamesa glacialis** Brundin, 1966*Maoridiamesa glacialis* Brundin, 1966, Kungl. Sv. Vet. Akad. Handl. (4) 11 (1): 414.**Maoridiamesa insularis** Brundin, 1966 Campbell I*Maoridiamesa insularis* Brundin, 1966, Kungl. Sv. Vet. Akad. Handl. (4) 11 (1): 414.

Tribe LOBODIAMESINI (sensu Brundin 1966)

Genus **Lobodiamesa** Pagast, 1947*Lobodiamesa* Pagast, 1947, Arch. Hydrobiol. 41: 446.**Lobodiamesa campbelli** Pagast, 1947*Lobodiamesa campbelli* Pagast, 1947, Arch. Hydrobiol. 41: 446.

Subfamily TELMATOGETONINAE (sensu Brundin, 1966)

Genus **Halirytus** Eaton, 1875*Halirytus* Eaton, 1875, Ent. Mon. Mag. 12: 60.**Halirytus macquariensis** Brundin, 1962*Halirytus macquariensis* Brundin, 1962, Pacific Insects 4 (4): 945.

Macquarie I

Subfamily ORTHOCLADIINAE

Genus **Diplocladius** Kieffer, 1908

Diplocladius Kieffer, 1908, Z. wiss. Insektenbiol. 4: 6.

Subgenus **Stictocladus** Edwards, 1931

Spaniotoma (*Stictocladus*) Edwards, 1931, Diptera Patagonia & S. Chile 2 (5): 279.

Diplocladius (**Stictocladus**) **lacuniferus** Freeman, 1959

Diplocladius lacuniferus Freeman, 1959, Bull. Br. Mus. Nat. Hist. Ent. 7 (9): 416.

Diplocladius (**Stictocladus**) **pictus** Freeman, 1959

Diplocladius pictus Freeman, 1959, Bull. Br. Mus. Nat. Hist. Ent. 7 (9): 416.

Genus **Syncricotopus** Brundin, 1956

Syncricotopus Brundin, 1956, Rep. Inst. Freshwat. Res. Drottningholm No. 37: 106.

Syncricotopus pluriserialis (Freeman, 1959)

Trichocladus pluriserialis Freeman, 1959, Bull. Br. Mus. Nat. Hist. Ent. 7 (9): 414.

Genus **Cricotopus** van der Wulp, 1874

Cricotopus van der Wulp, 1874, Tijdschr. Ent. 17: 132.

Cricotopus zealandicus Freeman, 1959

Cricotopus zealandicus Freeman, 1959, Bull. Br. Mus. Nat. Hist. Ent. 7 (9): 413.

Cricotopus cingulatus (Hutton, 1902)

Orthocladus cingulatus Hutton, 1902, Trans. Proc. N.Z. Inst. 34: 184.

Genus **Austrocladius** Freeman, 1961

Austrocladius Freeman, 1961, Aust. J. Zool. 9: 647.

Austrocladius harrisi (Freeman, 1959)

Chaetocladus harrisi Freeman, 1959, Bull. Br. Mus. Nat. Hist. Ent. 7 (9): 418.

Genus **Lymnophyes** Eaton, 1875

Lymnophyes Eaton, 1875, Ent. Mon. Mag. 12: 60.

Lymnophyes vestitus (Skuse, 1889)

Camptocladus vestitus Skuse, 1889, Proc. Linn. Soc. N.S.W. (2) 4: 263.

Genus **Metriocnemus** van der Wulp, 1874

Metriocnemus van der Wulp, 1874, Tijdschr. Ent. 17: 136.

Metriocnemus lobifer Freeman, 1959

Metriocnemus lobifer Freeman, 1959, Bull. Br. Mus. Nat. Hist. Ent. 7 (9): 412.

Genus **Orthocladus** van der Wulp, 1874

Orthocladus van der Wulp, 1874, Tijdschr. Ent. 17: 132.

Orthocladus pictipennis Freeman, 1959

Orthocladus pictipennis Freeman, 1959, Bull. Br. Mus. Nat. Hist. Ent. 7 (9): 419.

Genus **Smittia** Holmgren, 1869

Smittia Holmgren, 1869, Kungl. Sv. Vet. Akad. Handl. 8: 47.

Smittia verna (Hutton, 1902)

Camptocladus vernus Hutton, 1902, Trans. Proc. N.Z. Inst. 34: 185.

Genus **Camptocladus** van der Wulp, 1874

Camptocladus van der Wulp, 1874, Tijdschr. Ent. 17: 133.

Camptocladus stercorarius (De Geer, 1776)

Tipula stercoraria De Geer, 1776, Mémoires pour servir à l'histoire des insectes 6: 388.

Genus **Corynoneura** Winnertz, 1846*Corynoneura* Winnertz, 1846, Stettin. ent. Ztg. 7: 12.**Corynoneura donovani** Forsyth, 1971*Corynoneura donovani* Forsyth, 1971, J. R. Soc. N.Z. 1 (2): 121.

Subfamily CHIRONOMINAE

Tribe CHIRONOMINI

Genus **Riethia** Kieffer, 1917*Riethia* Kieffer, 1917, Anns. hist.-nat. Mus. natn. hung. 15: 203.**Riethia zeylandica** Freeman, 1959*Riethia zeylandica* Freeman, 1959, Bull. Br. Mus. Nat. Hist. Ent. 7 (9): 422.Genus **Chironomus** Meigen, 1803*Chironomus* Meigen, 1803, In Illiger Mag. Insektenk. 2: 260.Subgenus **Chironomus****Chironomus (Chironomus) zealandicus** Hudson, 1892*Chironomus zealandicus* Hudson, 1892, Manual N.Z. Entomology, 43.**Chironomus (Chironomus) analis** Freeman, 1959*Chironomus (Chironomus) analis* Freeman, 1959, Bull. Br. Mus. Nat. Hist. Ent. 7 (9): 425.Subgenus **Dicrotendipes** Kieffer, 1913*Dicrotendipes* Kieffer, 1913, In Voy. Alluaud & Jeannel Afr. or. Ins. Dipt. 1: 23.**Chironomus (Dicrotendipes) canterburyensis** Freeman, 1959*Chironomus (Dicrotendipes) canterburyensis* Freeman, 1959, Bull. Br. Mus. Nat. Hist. Ent. 7 (9): 425.Subgenus **Cryptochironomus** Kieffer, 1918*Cryptochironomus* Kieffer, 1918, Ent. Mitt. 7: 46.**Chironomus (Cryptochironomus) cylindricus** Freeman, 1959*Chironomus (Cryptochironomus) cylindricus* Freeman, 1959, Bull. Br. Mus. Nat. Hist. Ent. 7 (9): 425.Genus **Harrisius** Freeman, 1959*Harrisius* Freeman, 1959, Bull. Br. Mus. Nat. Hist. Ent. 7 (9): 426.**Harrisius pallidus** Freeman, 1959*Harrisius pallidus* Freeman, 1959, Bull. Br. Mus. Nat. Hist. Ent. 7 (9): 426.Genus **Ophryophorus** Freeman, 1959*Ophryophorus* Freeman, 1959, Bull. Br. Mus. Nat. Hist. Ent. 7 (9): 427.**Ophryophorus ramiferus** Freeman, 1959*Ophryophorus ramiferus* Freeman, 1959, Bull. Br. Mus. Nat. Hist. Ent. 7 (9): 428.Genus **Paucispinigera** Freeman, 1959*Paucispinigera* Freeman, 1959, Bull. Br. Mus. Nat. Hist. Ent. 7 (9): 428.**Paucispinigera approximata** Freeman, 1959*Paucispinigera approximata* Freeman, 1959, Bull. Br. Mus. Nat. Hist. Ent. 7 (9): 429.Genus **Polypedilum** Kieffer, 1913*Polypedilum* Kieffer, 1913, Bull. Soc. Hist. nat. Metz 28: 15.

Subgenus **Polypedilum**

- Polypedilum (Polypedilum) pavidus** (Hutton, 1902)
Chironomus pavidus Hutton, 1902, Trans. Proc. N.Z. Inst. 34: 183.
- Polypedilum (Polypedilum) longicrus** Kieffer, 1921
Polypedilum longicrus Kieffer, 1921, Anns. Soc. Sci. Bruxelles 40 (1): 101.
- Polypedilum (Polypedilum) opimus** (Hutton, 1902)
Chironomus opimus Hutton, 1902, Trans. Proc. N.Z. Inst. 34: 182.
- Polypedilum (Polypedilum) harrisi** Freeman, 1959
Polypedilum (Polypedilum) harrisi Freeman, 1959, Bull. Br. Mus. Nat. Hist. Ent. 7 (9): 433.
- Polypedilum (Polypedilum) digitulus** Freeman, 1959
Polypedilum (Polypedilum) digitulus Freeman, 1959, Bull. Br. Mus. Nat. Hist. Ent. 7 (9): 433.
- Polypedilum (Polypedilum) cumberi** Freeman, 1959
Polypedilum (Polypedilum) cumberi Freeman, 1959, Bull. Br. Mus. Nat. Hist. Ent. 7 (9): 434.
- Polypedilum (Polypedilum) ignavus** (Hutton, 1902)
Chironomus ignavus Hutton, 1902, Trans. Proc. N.Z. Inst. 34: 183.
- Polypedilum (Polypedilum) canum** Freeman, 1959
Polypedilum (Polypedilum) canum Freeman, 1959, Bull. Br. Mus. Nat. Hist. Ent. 7 (9): 434.
- Polypedilum (Polypedilum) luteum** Forsyth, 1971
Polypedilum (Polypedilum) luteum Forsyth, 1971, J. R. Soc. N.Z. 1 (2): 133.
- Polypedilum (Polypedilum) alternans** Forsyth, 1971
Polypedilum (Polypedilum) alternans Forsyth, 1971, J. R. Soc. N.Z. 1 (2): 133.

Tribe TANYTARSINI

Genus **Tanytarsus** van der Wulp, 1874

Tanytarsus van der Wulp, 1874, Tijdschr. Ent. 17: 134.

Subgenus **Tanytarsus**

- Tanytarsus (Tanytarsus) vespertinus** Hutton, 1902
Tanytarsus vespertinus Hutton, 1902, Trans. Proc. N.Z. Inst. 34: 185.
- Tanytarsus (Tanytarsus) funebris** Freeman, 1959
Tanytarsus (Tanytarsus) funebris Freeman, 1959, Bull. Br. Mus. Nat. Hist. Ent. 7 (9): 436.
- Tanytarsus (Tanytarsus) albanyensis** Forsyth, 1971
Tanytarsus albanyensis Forsyth, 1971, J. R. Soc. N.Z. 1 (2): 137.

Genus **Lundstroemia** Kieffer, 1921

Lundstroemia Kieffer, 1921, Anns. Soc. ent.fl Fr. 90: 36.

Lundstroemia agameta Forsyth, 1971

Lundstroemia agameta Forsyth, 1971, J. R. Soc. N.Z. 1 (2): 137.

Species dubiae

Chironomus lentus Hutton, 1902

Chironomus lentus Hutton, 1902, Trans. Proc. N.Z. Inst. 34: 182.

Family CERATOPOGONIDAE

Family SIMULIIDAE

Subfamily SIMULIINAE

Genus **Austrosimulium** Tonnoir, 1925

Austrosimulium Tonnoir, 1925, Bull. Ent. Res. 15 (3): 230.

Subgenus **Austrosimulium**

- Austrosimulium (Austrosimulium) australense** (Schiner, 1868)
Simulia australensis Schiner, 1868, Reise Fregatta Novara, Zool. 2 (1B) Dipt.: 15.
- Austrosimulium (Austrosimulium) longicorne** Tonnoir, 1925
Austrosimulium longicorne Tonnoir, 1925, Bull. Ent. Res. 15 (3): 254.
- Austrosimulium (Austrosimulium) tillyardianum** Dumbleton, 1973
Austrosimulium tillyardianum Dumbleton, 1973, N.Z. J. Sci. 15 (4): 513.
- Austrosimulium (Austrosimulium) multicorne multicorne** Tonnoir, 1925
Austrosimulium multicorne Tonnoir, 1925, Bull. Ent. Res. 15 (3): 254.
- Austrosimulium (Austrosimulium) multicorne fiordense** Dumbleton, 1973
Austrosimulium (Austrosimulium) multicorne fiordense Dumbleton, 1973, N.Z. J. Sci. 15 (4): 518.
- Austrosimulium (Austrosimulium) laticorne laticorne** Tonnoir, 1925
Austrosimulium laticorne Tonnoir, 1925, Bull. Ent. Res. 15 (3): 253.
- Austrosimulium (Austrosimulium) laticorne alveolatum** Dumbleton, 1973
Austrosimulium (Austrosimulium) laticorne alveolatum Dumbleton, 1973, N.Z. J. Sci. 15 (4): 522.
- Austrosimulium (Austrosimulium) stewartense** Dumbleton, 1973
Austrosimulium (Austrosimulium) stewartense Dumbleton, 1973, N.Z. J. Sci. 15 (4): 522.
- Austrosimulium (Austrosimulium) albovelatum** Dumbleton, 1973
Austrosimulium (Austrosimulium) albovelatum Dumbleton, 1973, N.Z. J. Sci. 15 (4): 524.
- Austrosimulium (Austrosimulium) unguatum** Tonnoir, 1925
Austrosimulium unguatum Tonnoir, 1925, Bull. Ent. Res. 15 (3): 250.
- Austrosimulium (Austrosimulium) vexans** (Mik, 1881) Auckland Is
Simulium vexans Mik, 1881, Verh. zool.-bot. Ges. Wien 31: 201.
- Austrosimulium (Austrosimulium) campbellense** Dumbleton, 1973 Campbell I
Austrosimulium (Austrosimulium) campbellense Dumbleton, 1973, N.Z. J. Sci. 15 (4): 535.
- Austrosimulium (Austrosimulium) bicorne** Dumbleton, 1973
Austrosimulium (Austrosimulium) bicorne Dumbleton, 1973, N.Z. J. Sci. 15 (4): 538.
- Austrosimulium (Austrosimulium) unicolorne** Dumbleton, 1973
Austrosimulium (Austrosimulium) unicolorne Dumbleton, 1973, N.Z. J. Sci. 15 (4): 543.

Family THAUMALEIDAE

Genus **Austrothaumalea** Tonnoir, 1927

- Austrothaumalea* Tonnoir, 1927, Rec. Canterbury Mus. 3 (2): 109.
- Austrothaumalea neozealandica** Tonnoir, 1927
Austrothaumalea neozealandica Tonnoir, 1927, Rec. Canterbury Mus. 3 (2): 110.
- Austrothaumalea appendiculata** Tonnoir, 1927
Austrothaumalea appendiculata Tonnoir, 1927, Rec. Canterbury Mus. 3 (2): 112.

Division BIBIOMORPHA

Family BLEPHAROCERIDAE

Subfamily APISTOMIINAE

Genus **Neocurupira** Lamb, 1913

- Neocurupira* Lamb, 1913, Trans. Proc. N.Z. Inst. 45: 72.

Subgenus **Neocurupira**

- Neocurupira (Neocurupira) hudsoni** Lamb, 1913
Neocurupira hudsoni Lamb, 1913, Trans. Proc. N.Z. Inst. 45: 73.

Neocurupira (Neocurupira) rotalapisculus Craig, 1969*Neocurupira rotalapisculus* Craig, 1969, Trans. R. Soc. N.Z. Biol. Sci. 11 (9): 119.**Neocurupira (Neocurupira) campbelli** Dumbleton, 1963*Neocurupira (Paracurupira) campbelli* Dumbleton, 1963, N.Z. J. Sci. 6 (2): 242.**Neocurupira (Neocurupira) tonnoiri** Dumbleton, 1963*Neocurupira (Paracurupira) tonnoiri* Dumbleton, 1963, N.Z. J. Sci. 6 (2): 238.**Neocurupira (Neocurupira) chiltoni** (Campbell, 1921)*Curupira chiltoni* Campbell, 1921, Trans. Proc. N.Z. Inst. 53: 260.Genus **Nothohoraia** Craig, 1969*Nothohoraia* Craig, 1969, Trans. R. Soc. N.Z. Biol. Sci. 11 (9): 132.**Nothohoraia micrognathia** Craig, 1969*Nothohoraia micrognathia* Craig, 1969, Trans. R. Soc. N.Z. Biol. Sci. 11 (9): 132.Genus **Peritheates** Lamb, 1913*Peritheates* Lamb, 1913, Trans. Proc. N.Z. Inst. 45: 74.**Peritheates turrifer** Lamb, 1913*Peritheates turrifer* Lamb, 1913, Trans. Proc. N.Z. Inst. 45: 75.**Peritheates harrisi** (Campbell, 1921)*Apistomyia harrisi* Campbell, 1921, Trans. Proc. N.Z. Inst. 53: 262.

Suborder BRACHYCERA

Division ORTHORRHAPHA

Superfamily TABANOIDEA

Family TABANIDAE

Family STRATIOMYIDAE

Genus **Eulalia** Meigen, 1800*Eulalia* Meigen, 1800, Nouv. Classif. Mouch., 21.**Eulalia atrovirens** (Bigot, 1879)*Odontomyia atrovirens* Bigot, 1879, Anns. Soc. ent. Fr. 5 (9): 214.

Superfamily EMPIDOIDEA

Family EMPIDIDAE

Subfamily HEMERODROMIINAE

Genus **Monodromia** Collin, 1928*Monodromia* Collin, 1928, N.Z. Empididae, 24.**Monodromia fragilis** Collin, 1928*Monodromia fragilis* Collin, 1928, N.Z. Empididae, 25.Genus **Phyllodromia** Zetterstedt, 1837*Phyllodromia* Zetterstedt, 1837, Isis von Oken, 1837, 31.**Phyllodromia scopulifera** Collin, 1928*Phyllodromia scopulifera* Collin, 1928, N.Z. Empididae, 25.**Phyllodromia striata** Collin, 1928*Phyllodromia striata* Collin, N.Z. Empididae, 26.Genus **Doliodromia** Collin, 1928*Doliodromia* Collin, 1928, N.Z. Empididae, 27.**Doliodromia avita** Collin, 1928*Doliodromia avita* Collin, 1928, N.Z. Empididae, 27.

Genus **Chelipoda** Macquart, 1823

Chelipoda Macquart, 1823, Recl. Trav. Soc. amat. Sci. Lille 1: 148.

Chelipoda consignata Collin, 1928

Chelipoda consignata Collin, 1928, N.Z. Empididae, 30.

Chelipoda abdita Collin, 1928

Chelipoda abdita Collin, 1928, N.Z. Empididae, 31.

Chelipoda otiraensis (Miller, 1923)

Litanomyia otiraensis Miller, 1923, Trans. Proc. N.Z. Inst. 54: 443.

Chelipoda mirabilis Collin, 1928

Chelipoda mirabilis Collin, 1928, N.Z. Empididae, 32.

Chelipoda recurva Collin, 1928

Chelipoda recurva Collin, 1928, N.Z. Empididae, 34.

Chelipoda longicornis Collin, 1928

Chelipoda longicornis Collin, 1928, N.Z. Empididae, 34.

Chelipoda secreta Collin, 1928

Chelipoda secreta Collin, 1928, N.Z. Empididae, 35.

Chelipoda trepida Collin, 1928

Chelipoda trepida Collin, 1928, N.Z. Empididae, 35.

Chelipoda inconspicua Collin, 1928

Chelipoda inconspicua Collin, 1928, N.Z. Empididae, 36.

Chelipoda interposita Collin, 1928

Chelipoda interposita Collin, 1928, N.Z. Empididae, 37.

Chelipoda abjecta Collin, 1928

Chelipoda abjecta Collin, 1928, N.Z. Empididae, 37.

Chelipoda delecta Collin, 1928

Chelipoda delecta Collin, 1928, N.Z. Empididae, 38.

Chelipoda moderata Collin, 1928

Chelipoda moderata Collin, 1928, N.Z. Empididae, 39.

Chelipoda modica Collin, 1928

Chelipoda modica Collin, 1928, N.Z. Empididae, 39.

Chelipoda oblata Collin, 1928

Chelipoda oblata Collin, 1928, N.Z. Empididae, 40.

Chelipoda oblinita Collin, 1928

Chelipoda oblinita Collin, 1928, N.Z. Empididae, 41.

Chelipoda digressa Collin, 1931

Chelipoda digressa Collin, 1931, Ann. Mag. Nat. Hist. (10) 8: 353.

Genus **Hemerodromia** Meigen, 1822

Hemerodromia Meigen, 1822, Syst. Besch. Zweifl. Insekt. 3: 61.

Hemerodromia radialis Collin, 1928

Hemerodromia radialis Collin, 1928, N.Z. Empididae, 42.

Genus **Chelifera** Macquart, 1823

Chelifera Macquart, 1823, Recl. Trav. Soc. amat. Sci. Lille 1: 150.

Chelifera tantula Collin, 1928

Chelifera tantula Collin, 1928, N.Z. Empididae, 43.

Chelifera apicata Collin, 1928

Chelifera apicata Collin, 1928, N.Z. Empididae, 44.

Chelifera tacita Collin, 1928

Chelifera tacita Collin, 1928, N.Z. Empididae, 44.

Chelifera fontanalis (Miller, 1923)

Hemerodromia fontanalis Miller, 1923, Trans. Proc. N.Z. Inst. 54: 442.

Genus **Neoplasta** Coquillett, 1896*Neoplasta* Coquillett, 1896, Proc. U.S. Natn. Mus. 18: 389.**Neoplasta inturbida** Collin, 1928*Neoplasta inturbida* Collin, 1928, N.Z. Empididae, 45.Genus **Cladodromia** Bezzi, 1905*Cladodromia* Bezzi, 1905, Annls. Mus. Hung. 3: 453.**Cladodromia soleata** Collin, 1928*Cladodromia soleata* Collin, 1928, N.Z. Empididae, 47.**Cladodromia insignata** Collin, 1928*Cladodromia insignata* Collin, 1928, N.Z. Empididae, 48.**Cladodromia futilis** Collin, 1928*Cladodromia futilis* Collin, 1928, N.Z. Empididae, 50.**Cladodromia negata** Collin, 1928*Cladodromia negata* Collin, 1928, N.Z. Empididae, 50.Genus **Sematopoda** Collin, 1928*Sematopoda* Collin, 1928, N.Z. Empididae, 51.**Sematopoda elata** Collin, 1928*Sematopoda elata* Collin, 1928, N.Z. Empididae, 52.

Subfamily CLINOCERINAE

Genus **Dipsomyia** Bezzi, 1909*Dipsomyia* Bezzi, 1909, Nova Acta Acad. Caesar. Leop. Carol. 91 (3): 388.**Dipsomyia mutabilis** Collin, 1928*Dipsomyia mutabilis* Collin, 1928, N.Z. Empididae, 60.Genus **Clinocera** Meigen, 1803*Clinocera* Meigen, 1803, In Illiger Mag. Insektenk. 2: 271.**Clinocera gressitti** Smith, 1964*Clinocera gressitti* Smith, 1964, Pacific Insects Monogr. 7: 327.

Campbell I

Division CYCLORRHAPHA

Series ASCHIZA

Superfamily SYRPHOIDEA

Family SYRPHIDAE

Genus **Eristalis** Latreille, 1804*Eristalis* Latreille, 1804, Nouv. Dict. H.N. 24 (Tab.): 194.**Eristalis tenax** (Linnaeus 1758)*Musca tenax* Linnaeus, 1758, Syst. Nat. Ed. 10: 591.Genus **Helophilus** Meigen, 1822*Helophilus* Meigen, 1822, Syst. Besch. Zweifl. Insekt. 3: 368.**Helophilus antipodus** Schiner, 1868

NZ, Auckland Is, Campbell I

Helophilus antipodus Schiner, 1868, Reise Fregatta Novara Zool. 2 (1B) Dipt.: 359.**Helophilus campbellicus** Hutton, 1902

Campbell I

Helophilus campbellicus Hutton, 1902, Trans. Proc. N.Z. Inst. 34: 170.**Helophilus cargilli** Miller, 1911*Helophilus cargilli* Miller, 1911, Trans. N.Z. Inst. 43: 126.**Helophilus chathamensis** Hutton, 1901

Chatham Is

Helophilus chathamensis Hutton, 1901, Trans. Proc. N.Z. Inst. 33: 39.

Helophilus hectori Miller, 1924*Helophilus hectori* Miller, 1924, Trans. Proc. N.Z. Inst. 55: 283.**Helophilus hochstetteri** Nowicki, 1875*Helophilus hochstetteri* Nowicki, 1875, Mem. Krakauer Akad. Wissen 2: 23.**Helophilus ineptus** Walker, 1849*Helophilus ineptus* Walker, 1849, List dipterous insects Br. Mus. Part 3: 608.**Helophilus taruensis** Miller, 1924*Helophilus taruensis* Miller, 1924, Trans. Proc. N.Z. Inst. 55: 283.**Helophilus trilineatus** (Fabricius, 1775)*Syrphus trilineatus* Fabricius, 1775, Syst. Ent., 766.

Series SCHIZOPHORA

Superfamily DROSOPHILOIDEA

Family EPHYDRIDAE

Subfamily EPHYDRINAE

Genus **Brachydeutera** Loew, 1862*Brachydeutera* Loew, 1862, Monogr. Dipt. N. Am. 1: 162.**Brachydeutera sydneyensis** Malloch, 1924*Brachydeutera sydneyensis* Malloch, 1924, Proc. Linn. Soc. N.S.W. 49: 335.Genus **Neoscatella** Malloch, 1935*Neoscatella* Malloch, 1935, Bull. Bernice P. Bishop Mus. 114: 9.**Neoscatella vittithorax** Malloch, 1925*Neoscatella vittithorax* Malloch, 1925, Proc. Linn. Soc. N.S.W. 50: 331.Genus **Ephydrella** Tonnoir and Malloch, 1926*Ephydra* (*Ephydrella*) Tonnoir & Malloch, 1926, Rec. Canterbury Mus. 3 (1): 6.**Ephydrella aquaria** (Hutton, 1901)*Ephydra aquaria* Hutton, 1901, Trans. Proc. N.Z. Inst. 33: 90.**Ephydrella novaezealandiae** (Tonnoir and Malloch, 1926)*Ephydra novaezealandiae* Tonnoir & Malloch, 1926, Rec. Canterbury Mus. 3 (1): 8.**Ephydrella thermanum** Dumbleton, 1969*Ephydrella thermanum* Dumbleton, 1969, N.Z. Ent. 4 (2): 39.Genus **Ephydra** Fallén, 1810*Ephydra* Fallén, 1810, Sp. Ent. nov. Dipt., 22.**Ephydra macquariensis** Womersley, 1937

Macquarie I

Ephydra macquariensis Womersley, 1937, Br. Aust. N.Z. Antarct. Res. Exped. Rep. (B) 4 (3): 77.

Superfamily MUSCOIDEA

Family MUSCIDAE

Order TRICHOPTERA

Suborder ANNULIPALPIA

Superfamily HYDROPSYCHOIDEA

Family HYDROPSYCHIDAE

Subfamily HYDROPSYCHINAE Ulmer, 1903

Genus **Hydropsyche** Pictet, 1834*Hydropsyche* Pictet, 1834, Recherch. Phryg., 199.**Hydropsyche fimbriata** McLachlan, 1862*Hydropsyche fimbriata* McLachlan, 1862, Trans. Ent. Soc. London (3) 1: 309.

- Hydropsyche thomasi** Wise, 1962
Hydropsyche thomasi Wise, 1962, Rec. Auckland Inst. Mus. 5 (5, 6): 248.
- Hydropsyche colonica** McLachlan, 1871
Hydropsyche colonica McLachlan, 1871, J. Linn. Soc. London Zool. 11: 131.
- Hydropsyche raruraru** McFarlane, 1973
Hydropsyche raruraru McFarlane, 1973, J. R. Soc. N.Z. 3 (1): 30.
- Hydropsyche tepoka** Mosely, 1953
Hydropsyche tepoka Mosely, 1953, Trichoptera Aust. & N.Z., 320.
- Hydropsyche tipua** McFarlane, 1964
Hydropsyche tipua McFarlane, 1964, Rec. Canterbury Mus. 8 (1): 59.
- Hydropsyche auricoma** Hare, 1910
Hydropsyche auricoma Hare, 1910, Trans. Proc. N.Z. Inst. 42: 32.
- Hydropsyche occulta** (Hare, 1910)
Hydrobiosis occulta Hare, 1910, Trans. Proc. N.Z. Inst. 42: 32.
- Hydropsyche philpotti** Tillyard, 1924
Hydropsyche philpotti Tillyard, 1924, Trans. Proc. N.Z. Inst. 55: 301.
- Hydropsyche catherinae** McFarlane, 1960
Hydropsyche catherinae McFarlane, 1960, Rec. Canterbury Mus. 7 (3): 207.

Subfamily DIPLECTRONINAE Ulmer

Genus **Diplectrona** Westwood, 1840

- Diplectrona* Westwood, 1840, Intro. mod. class. Ins. 2 Gen. Syn.: 49.
- Diplectrona zealandensis** Mosely, 1953
Diplectrona zealandensis Mosely, 1953, Trichoptera Aust. & N.Z., 340.
- Diplectrona bulla** Wise, 1958
Diplectrona bulla Wise, 1958, Rec. Auckland Inst. Mus. 5 (1, 2): 56.

Family POLYCENTROPODIDAE

Genus **Plectrocnemia** Stephens, 1836

- Plectrocnemia* Stephens, 1836, Illustrations British Ent. Mandibulata 6: 168.
- Plectrocnemia maclachlani** Mosely, 1953
Plectrocnemia maclachlani Mosely, 1953, Trichoptera Aust. & N.Z., 355.

Genus **Polyplectropus** Ulmer, 1905

- Polyplectropus* Ulmer, 1905, Stettin. ent. Ztg. 66: 103.
- Polyplectropus puerilis** (McLachlan, 1868)
Polycentropus puerilis McLachlan, 1868, J. Linn. Soc. London Zool. 10: 204.
- Polyplectropus waitakerensis** Wise, 1962
Polyplectropus waitakerensis Wise, 1962, Rec. Auckland Inst. Mus. 5 (5, 6): 249.
- Polyplectropus impluvii** Wise, 1962
Polyplectropus impluvii Wise, 1962, Rec. Auckland Inst. Mus. 5 (5, 6): 249.
- Polyplectropus aurifusca** McFarlane, 1956
Polyplectropus aurifusca McFarlane, 1956, Rec. Canterbury Mus. 7 (1): 34.
- Polyplectropus puhia** McFarlane, 1956
Polyplectropus puhia McFarlane, 1956, Rec. Canterbury Mus. 7 (1): 36.

Family PSYCHOMYIIDAE

Subfamily ECNOMINAE Ulmer, 1907

Genus **Ecnomina** Kimmins, 1953

- Ecnomina* Kimmins, 1953, Trichoptera Aust. & N.Z., 380.
- Ecnomina zealandica** Wise, 1958
Ecnomina zealandica Wise, 1958, Rec. Auckland Inst. Mus. 5 (1, 2): 57.

Subfamily PSYCHOMYIINAE Ulmer, 1907

Genus **Zelandoptila** Tillyard, 1924*Zelandoptila* Tillyard, 1924, Trans. Proc. N.Z. Inst. 55: 300.**Zelandoptila moselyi** Tillyard, 1924*Zelandoptila moselyi* Tillyard, 1924, Trans. Proc. N.Z. Inst. 55: 301.

Family PHILOPOTAMIDAE

Genus **Dolophilodes** Ulmer, 1909*Dolophilodes* Ulmer, 1909, Notes Leyden Mus. 31: 125.Subgenus **Hydrobiosella** Tillyard, 1924*Hydrobiosella* Tillyard, 1924, Trans. Proc. N.Z. Inst. 55: 288.**Dolophilodes (Hydrobiosella) stenocerca** (Tillyard, 1924)*Hydrobiosella stenocerca* Tillyard, 1924, Trans. Proc. N.Z. Inst. 55: 289.**Dolophilodes (Hydrobiosella) tonela** (Mosely, 1953)*Zelobiosella tonela* Mosely, 1953, Trichoptera Aust. & N.Z., 397.Genus **Neobiosella** Wise, 1958*Neobiosella* Wise, 1958, Rec. Auckland Inst. Mus. 5 (1, 2): 57.**Neobiosella irrorata** Wise, 1958*Neobiosella irrorata* Wise, 1958, Rec. Auckland Inst. Mus. 5 (1, 2): 58.

Suborder INTEGRIPALPIA

Superfamily RHYACOPHILOIDEA

Family RHYACOPHILIDAE

Subfamily HYDROBIOSINAE Ulmer, 1905

Genus **Hydrobiosis** McLachlan, 1868*Hydrobiosis* McLachlan, 1868, J. Linn. Soc. London Zool. 10: 206.**Hydrobiosis styx** McFarlane, 1951*Hydrobiosis styx* McFarlane, 1951, Rec. Canterbury Mus. 5 (5): 260.**Hydrobiosis spatulata** McFarlane, 1951*Hydrobiosis spatulata* McFarlane, 1951, Rec. Canterbury Mus. 5 (5): 258.**Hydrobiosis gollanis** Mosely, 1953*Hydrobiosis gollanis* Mosely, 1953, Trichoptera Aust. & N.Z., 408.**Hydrobiosis umbripennis** McLachlan, 1868*Hydrobiosis umbripennis* McLachlan, 1868, J. Linn. Soc. London Zool. 10: 208.**Hydrobiosis parumbripennis** McFarlane, 1951*Hydrobiosis parumbripennis* McFarlane, 1951, Rec. Canterbury Mus. 5 (5): 256.**Hydrobiosis falcis** Wise, 1958*Hydrobiosis falcis* Wise, 1958, Rec. Auckland Inst. Mus. 5 (1, 2): 58.**Hydrobiosis lindsayi** Tillyard, 1925*Hydrobiosis lindsayi* Tillyard, 1925, Rec. Canterbury Mus. 2 (5): 277.**Hydrobiosis budgei** McFarlane, 1960*Hydrobiosis budgei* McFarlane, 1960, Rec. Canterbury Mus. 7 (3): 210.**Hydrobiosis copis** McFarlane, 1960*Hydrobiosis copis* McFarlane, 1960, Rec. Canterbury Mus. 7 (3): 210.**Hydrobiosis styracine** McFarlane, 1960*Hydrobiosis styracine* McFarlane, 1960, Rec. Canterbury Mus. 7 (3): 212.**Hydrobiosis silvicola** McFarlane, 1951*Hydrobiosis silvicola* McFarlane, 1951, Rec. Canterbury Mus. 5 (5): 258.

Chatham Is

Hydrobiosis kiddi McFarlane, 1951

Hydrobiosis kiddi McFarlane, 1951, Rec. Canterbury Mus. 5 (5): 257.

Hydrobiosis harpidiosa McFarlane, 1951

Hydrobiosis harpidiosa McFarlane, 1951, Rec. Canterbury Mus. 5 (5): 257.

Hydrobiosis frater McLachlan, 1868

Hydrobiosis frater McLachlan, 1868, J. Linn. Soc. London Zool. 10: 207.

Hydrobiosis soror Mosely, 1953

Hydrobiosis soror Mosely, 1953, Trichoptera Aust. & N.Z., 421.

Hydrobiosis clavigera McFarlane, 1951

Hydrobiosis clavigera McFarlane, 1951, Rec. Canterbury Mus. 5 (5): 259.

Hydrobiosis charadraea McFarlane, 1951

Hydrobiosis charadraea McFarlane, 1951, Rec. Canterbury Mus. 5 (5): 259.

Hydrobiosis ingenua Hare, 1910

Hydrobiosis ingenua Hare, 1910, Trans. N.Z. Inst. 42: 33.

Genus **Psilochorema** McLachlan, 1866

Psilochorema McLachlan, 1866, Trans. Ent. Soc. London (3) 5: 273.

Psilochorema mimicum McLachlan, 1866

Psilochorema mimicum McLachlan, 1866, Trans. Ent. Soc. London (3) 5: 274.

Psilochorema vomerharpax McFarlane, 1964

Psilochorema vomerharpax McFarlane, 1964, Rec. Canterbury Mus. 8 (1): 61.

Psilochorema tauroru McFarlane, 1964

Psilochorema tauroru McFarlane, 1964, Rec. Canterbury Mus. 8 (1): 62.

Psilochorema nemorale McFarlane, 1951

Psilochorema nemorale McFarlane, 1951, Rec. Canterbury Mus. 5 (5): 262.

Psilochorema macroharpax McFarlane, 1951

Psilochorema macroharpax McFarlane, 1951, Rec. Canterbury Mus. 5 (5): 263.

Psilochorema bidens McFarlane, 1951

Psilochorema bidens McFarlane, 1951, Rec. Canterbury Mus. 5 (5): 262.

Psilochorema mataura McFarlane, 1956

Psilochorema mataura McFarlane, 1956, Rec. Canterbury Mus. 7 (1): 39.

Psilochorema leptoharpax McFarlane, 1951

Psilochorema leptoharpax McFarlane, 1951, Rec. Canterbury Mus. 5 (5): 261.

Psilochorema donaldsoni McFarlane, 1960

Psilochorema donaldsoni McFarlane, 1960, Rec. Canterbury Mus. 7 (3): 213.

Psilochorema folioharpax McFarlane, 1956

Psilochorema folioharpax McFarlane, 1956, Rec. Canterbury Mus. 7 (1): 40.

Genus **Edpercivalia** McFarlane, 1964

Edpercivalia McFarlane, 1964, Rec. Canterbury Mus. 8 (1): 72.

Edpercivalia cassicola (McFarlane, 1939)

Percivalia cassicola McFarlane, 1939, Trans. Proc. R. Soc. N.Z. 69: 333.

Edpercivalia maxima (McFarlane, 1939)

Percivalia maxima McFarlane, 1939, Trans. Proc. R. Soc. N.Z. 69: 331.

Edpercivalia fusca (McFarlane, 1939)

Percivalia fusca McFarlane, 1939, Trans. Proc. R. Soc. N.Z. 69: 332.

Edpercivalia shandi (McFarlane, 1951)

Percivalia shandi McFarlane, 1951, Rec. Canterbury Mus. 5 (5): 263.

Edpercivalia banksiensis (McFarlane, 1939)

Percivalia banksiensis McFarlane, 1939, Trans. Proc. R. Soc. N.Z. 69: 234.

Edpercivalia borealis (McFarlane, 1951)

Percivalia borealis McFarlane, 1951, Rec. Canterbury Mus. 5 (5): 264.

Edpercivalia thomasoni (McFarlane, 1960)*Notiobiosis thomasoni* McFarlane, 1960, Rec. Canterbury Mus. 7 (3): 214.**Edpercivalia spaini** McFarlane, 1973*Edpercivalia spaini* McFarlane, 1973, J. R. Soc. N.Z. 3 (1): 34.Genus **Synchorema** Tillyard, 1924*Synchorema* Tillyard, 1924, Trans. Proc. N.Z. Inst. 55: 296.**Synchorema zygoneura** Tillyard, 1924*Synchorema zygoneura* Tillyard, 1924, Trans. Proc. N.Z. Inst. 55: 297.**Synchorema tillyardi** McFarlane, 1964*Synchorema tillyardi* McFarlane, 1964, Rec. Canterbury Mus. 8 (1): 71.Genus **Neurochorema** Tillyard, 1924*Neurochorema* Tillyard, 1924, Trans. Proc. N.Z. Inst. 55: 290.**Neurochorema confusum** (McLachlan, 1868)*Psilochorema confusum* McLachlan, 1868, J. Linn. Soc. London Zool. 10: 210.**Neurochorema armstrongi** McFarlane, 1951*Neurochorema armstrongi* McFarlane, 1951, Rec. Canterbury Mus. 5 (5): 254.**Neurochorema pilosum** McFarlane, 1964*Neurochorema pilosum* McFarlane, 1964, Rec. Canterbury Mus. 8 (1): 67.**Neurochorema forsteri** McFarlane, 1964*Neurochorema forsteri* McFarlane, 1964, Rec. Canterbury Mus. 8 (1): 68.Genus **Hydrochorema** Tillyard, 1924*Hydrochorema* Tillyard, 1924, Trans. Proc. N.Z. Inst. 55: 202.**Hydrochorema crassicaudatum** Tillyard, 1924*Hydrochorema crassicaudatum* Tillyard, 1924, Trans. Proc. N.Z. Inst. 55: 293.**Hydrochorema tenuicaudatum** Tillyard, 1924*Hydrochorema tenuicaudatum* Tillyard, 1924, Trans. Proc. N.Z. Inst. 55: 295.Genus **Atrachorema** McFarlane, 1964*Atrachorema* McFarlane, 1964, Rec. Canterbury Mus. 8 (1): 62.**Atrachorema mangu** McFarlane, 1964*Atrachorema mangu* McFarlane, 1964, Rec. Canterbury Mus. 8 (1): 63.**Atrachorema tuarua** McFarlane, 1966*Atrachorema tuarua* McFarlane, 1966, Rec. Canterbury Mus. 8 (2): 158.Genus **Costachorema** McFarlane, 1939*Costachorema* McFarlane, 1939, Trans. Proc. R. Soc. N.Z. 69: 335.**Costachorema callistum** McFarlane, 1939*Costachorema callistum* McFarlane, 1939, Trans. Proc. R. Soc. N.Z. 69: 337.**Costachorema brachyptera** McFarlane, 1939*Costachorema brachyptera* McFarlane, 1939, Trans. Proc. R. Soc. N.Z. 69: 338.**Costachorema xanthoptera** McFarlane, 1939*Costachorema xanthoptera* McFarlane, 1939, Trans. Proc. R. Soc. N.Z. 69: 336.**Costachorema psaroptera** McFarlane, 1939*Costachorema psaroptera* McFarlane, 1939, Trans. Proc. R. Soc. N.Z. 69: 335.**Costachorema notoptera** Wise, 1972*Costachorema notoptera* Wise, 1972, Rec. Auckland Inst. Mus. 9: 253.

Auckland Is

Genus **Tiphobiosis** Tillyard, 1924*Tiphobiosis* Tillyard, 1924, Trans. Proc. N.Z. Inst. 55: 298.

Tiphobiosis montana Tillyard, 1924*Tiphobiosis montana* Tillyard, 1924, Trans. Proc. N.Z. Inst. 55: 299.**Tiphobiosis fulva** Tillyard, 1924*Tiphobiosis fulva* Tillyard, 1924, Trans. Proc. N.Z. Inst. 55: 300.**Tiphobiosis intermedia** Mosely, 1953*Tiphobiosis intermedia* Mosely, 1953, Trichoptera Aust. & N.Z., 491.**Tiphobiosis veniflex** McFarlane, 1960*Tiphobiosis veniflex* McFarlane, 1960, Rec. Canterbury Mus. 7 (3): 216.**Tiphobiosis plicosta** McFarlane, 1960*Tiphobiosis plicosta* McFarlane, 1960, Rec. Canterbury Mus. 7 (3): 217.**Tiphobiosis kuscheli** Wise, 1972*Tiphobiosis kuscheli* Wise, 1972, Rec. Auckland Inst. Mus. 9: 258.

Auckland Is

Family HYDROPTILIDAE

Genus **Oxyethira** Eaton, 1873*Oxyethira* Eaton, 1873, Trans. Ent. Soc. London 1873: 143.**Oxyethira albiceps** (McLachlan, 1862) NZ, Chatham Is, Auckland Is, Campbell I*Hydroptila albiceps* McLachlan, 1862, Trans. Ent. Soc. London (3) 1: 304.Genus **Paroxyethira** Mosely, 1924*Paroxyethira* Mosely, 1924, Trans. Proc. N.Z. Inst. 55: 670.**Paroxyethira hendersoni** Mosely, 1924*Paroxyethira hendersoni* Mosely, 1924, Trans. Proc. N.Z. Inst. 55: 673.**Paroxyethira eatoni** Mosely, 1924*Paroxyethira eatoni* Mosely, 1924, Trans. Proc. N.Z. Inst. 55: 673.**Paroxyethira tillyardi** Mosely, 1924*Paroxyethira tillyardi* Mosely, 1924, Trans. Proc. N.Z. Inst. 55: 670.**Paroxyethira hintoni** Leader, 1972*Paroxyethira hintoni* Leader, 1972, J. Ent. (B) 41 (2): 191.**Paroxyethira kimminsi** Leader, 1972*Paroxyethira kimminsi* Leader, 1972, J. Ent. (B) 41 (2): 194.

Superfamily LIMNAPHILOIDEA

LIMNAPHILID branch

Family KOKIRIIDAE McFarlane, 1964

(= Rhynchopsychidae Ross, 1967)

Genus **Kokiria** McFarlane, 1964*Kokiria* McFarlane, 1964, Rec. Canterbury Mus. 8 (1): 73.**Kokiria miharo** McFarlane, 1964*Kokiria miharo* McFarlane, 1964, Rec. Canterbury Mus. 8 (1): 79.

LEPTOCERID branch

Family PYCNOCENTRELLIDAE Ross, 1967

Genus **Pycnocentrella** Mosely, 1953*Pycnocentrella* Mosely, 1953, Trichoptera Aust. & N.Z., 145.**Pycnocentrella eruensis** Mosely, 1953*Pycnocentrella eruensis* Mosely, 1953, Trichoptera Aust. & N.Z., 145.Genus **Alloecentrella** Wise, 1958*Alloecentrella* Wise, 1958, Rec. Auckland Inst. Mus. 5 (1, 2): 53.**Alloecentrella magnicornis** Wise, 1958*Alloecentrella magnicornis* Wise, 1958, Rec. Auckland Inst. Mus. 5 (1, 2): 53.

Family SERICOSTOMATIDAE

Genus **Pycnocentria** McLachlan, 1866

Pycnocentria McLachlan, 1866, Trans. Ent. Soc. London (3) 5: 251.

Pycnocentria funerea McLachlan, 1866

Pycnocentria funerea McLachlan, 1866, Trans. Ent. Soc. London (3) 5: 252.

Pycnocentria evecta McLachlan, 1868

Pycnocentria evecta McLachlan, 1868, J. Linn. Soc. London Zool. 10: 199.

Pycnocentria forcipata Mosely, 1953

Pycnocentria forcipata Mosely, 1953, Trichoptera Aust. & N.Z., 38.

Pycnocentria hawdonia McFarlane, 1956

Pycnocentria hawdonia McFarlane, 1956, Rec. Canterbury Mus. 7 (1): 30.

Pycnocentria sylvestris McFarlane, 1973

Pycnocentria sylvestris McFarlane, 1973, J. R. Soc. N.Z. 3 (1): 25.

Genus **Beraeoptera** Mosely, 1953

Beraeoptera Mosely, 1953, Trichoptera Aust. & N.Z., 52.

Beraeoptera roria Mosely, 1953

Beraeoptera roria Mosely, 1953, Trichoptera Aust. & N.Z., 53.

Genus **Pycnocentrodes** Tillyard, 1924

Pycnocentrodes Tillyard, 1924, Trans. Proc. N.Z. Inst. 55: 307.

Pycnocentrodes chiltoni Tillyard, 1924

Pycnocentrodes chiltoni Tillyard, 1924, Trans. Proc. N.Z. Inst. 55: 309.

Pycnocentrodes aureola (McLachlan, 1868)

Pycnocentria aureola McLachlan, 1868, J. Linn. Soc. London Zool. 10: 200.

Pycnocentrodes aeris Wise, 1958

Pycnocentrodes aeris Wise, 1958, Rec. Auckland Inst. Mus. 5 (1, 2): 50.

Pycnocentrodes unicolor Wise, 1958

Pycnocentrodes unicolor Wise, 1958, Rec. Auckland Inst. Mus. 5 (1, 2): 50.

Genus **Confluens** Wise, 1962

Confluens Wise, 1962, Rec. Auckland Inst. Mus. 5 (5, 6): 247.

Confluens hamiltoni (Tillyard, 1924)

Pycnocentrodes hamiltoni Tillyard, 1924, Trans. Proc. N.Z. Inst. 55: 311.

Confluens olingoides (Tillyard, 1924)

Pycnocentrodes olingoides Tillyard, 1924, Trans. Proc. N.Z. Inst. 55: 310.

Genus **Periwinkla** McFarlane, 1973

Periwinkla McFarlane, 1973, J. R. Soc. N.Z. 3 (1): 23.

Periwinkla childi McFarlane, 1973

Periwinkla childi McFarlane, 1973, J. R. Soc. N.Z. 3 (1): 24.

Genus **Conuxia** McFarlane, 1966

Conuxia McFarlane, 1966, Rec. Canterbury Mus. 8 (2): 141.

Conuxia gunni (McFarlane, 1956)

Conia gunni McFarlane, 1956, Rec. Canterbury Mus. 7 (1): 31.

Genus **Olinga** McLachlan, 1894

Olinga McLachlan, 1894, Ent. Mon. Mag. 30: 240.

Olinga feredayi (McLachlan, 1868)

Olinx feredayi McLachlan, 1868, J. Linn. Soc. London Zool. 10: 198.

Olinga fumosa Wise, 1958*Olinga fumosa* Wise, 1958, Rec. Auckland Inst. Mus. 5 (1, 2): 52.**Olinga jeanae** McFarlane, 1966*Olinga jeanae* McFarlane, 1966, Rec. Canterbury Mus. 8 (2): 144.Tribe **OECONESINI** Tillyard, 1921Genus **Oeconesus** McLachlan, 1862*Oeconesus* McLachlan, 1862, Trans. Ent. Soc. London (3) 1: 303.**Oeconesus maori** McLachlan, 1862*Oeconesus maori* McLachlan, 1862, Trans. Ent. Soc. London (3) 1: 303.**Oeconesus lobatus** Wise, 1958*Oeconesus lobatus* Wise, 1958, Rec. Auckland Inst. Mus. 5 (1, 2): 51.**Oeconesus similis** Mosely, 1953*Oeconesus similis* Mosely, 1953, Trichoptera Aust. & N.Z., 103.**Oeconesus incisus** Mosely, 1953*Oeconesus incisus* Mosely, 1953, Trichoptera Aust. & N.Z., 104.Genus **Pseudoeconesus** McLachlan, 1894*Pseudoeconesus* McLachlan, 1894, Ent. Mon. Mag. 30: 239.**Pseudoeconesus stramineus** McLachlan, 1894*Pseudoeconesus stramineus* McLachlan, 1894, Ent. Mon. Mag. 30: 240.**Pseudoeconesus bistirpis** Wise, 1958*Pseudoeconesus bistirpis* Wise, 1958, Rec. Auckland Inst. Mus. 5 (1, 2): 52.**Pseudoeconesus tristirpis** Wise, 1958*Pseudoeconesus tristirpis* Wise, 1958, Rec. Auckland Inst. Mus. 5 (1, 2): 52.**Pseudoeconesus squamosus** Mosely, 1953*Pseudoeconesus squamosus* Mosely, 1953, Trichoptera Aust. & N.Z., 112.**Pseudoeconesus hudsoni** Mosely, 1953*Pseudoeconesus hudsoni* Mosely, 1953, Trichoptera Aust. & N.Z., 112.**Pseudoeconesus mimus** McLachlan, 1894*Pseudoeconesus mimus* McLachlan, 1894, Ent. Mon. Mag. 30: 239.**Pseudoeconesus karoriensis** Mosely, 1953*Pseudoeconesus karoriensis* Mosely, 1953, Trichoptera Aust. & N.Z., 116.Genus **Tarapsyche** McFarlane, 1960*Tarapsyche* McFarlane, 1960, Rec. Canterbury Mus. 7 (3): 204.**Tarapsyche olis** McFarlane, 1960*Tarapsyche olis* McFarlane, 1960, Rec. Canterbury Mus. 7 (3): 205.Genus **Zelandopsyche** Tillyard, 1921*Zelandopsyche* Tillyard, 1921, Trans. Proc. N.Z. Inst. 53: 348.**Zelandopsyche ingens** Tillyard, 1921*Zelandopsyche ingens* Tillyard, 1921, Trans. Proc. N.Z. Inst. 53: 349.Genus **Zepsyche** McFarlane, 1960*Zepsyche* McFarlane, 1960, Rec. Canterbury Mus. 7 (3): 205.**Zepsyche acinaces** McFarlane, 1960*Zepsyche acinaces* McFarlane, 1960, Rec. Canterbury Mus. 7 (3): 206.Family **HELICOPHIDAE**Genus **Zelolessica** McFarlane, 1956*Zelolessica* McFarlane, 1956, Rec. Canterbury Mus. 7 (1): 33.**Zelolessica cheira** McFarlane, 1956*Zelolessica cheira* McFarlane, 1956, Rec. Canterbury Mus. 7 (1): 33.

Family PHILANISIDAE

Genus **Philanisus** Walker, 1852*Philanisus* Walker, 1852, Cat. neuropterous insects Br. Mus. Part 1: 115.**Philanisus plebeius** Walker, 1852*Philanisus plebeius* Walker, 1852, Cat. neuropterous insects Br. Mus. Part 1: 116.Genus **Chathamia** Tillyard, 1925*Chathamia* Tillyard, 1925, Rec. Canterbury Mus. 2 (5): 279.**Chathamia brevipennis** Tillyard, 1925*Chathamia brevipennis* Tillyard, 1925, Rec. Canterbury Mus. 2 (5): 280.

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Family PHILORHEITHRIDAE

Genus **Philorheithrus** Hare, 1910*Philorheithrus* Hare, 1910, Trans. N.Z. Inst. 42: 32.**Philorheithrus agilis** (Hudson, 1904)*Pseudoeconesus (?) agilis* Hudson, 1904, N.Z. Neuroptera, 64.**Philorheithrus lacustris** Tillyard, 1924*Philorheithrus lacustris* Tillyard, 1924, Trans. Proc. N.Z. Inst. 55: 305.

Family HELICOPSYCHIDAE

Genus **Helicopsyche** Hagen, 1866*Helicopsyche* Hagen, 1866, Ent. Mon. Mag. 2: 252.**Helicopsyche zealandica** Hudson, 1904*Helicopsyche zealandica* Hudson, 1904, N.Z. Neuroptera, 70.**Helicopsyche poutini** McFarlane, 1964*Helicopsyche poutini* McFarlane, 1964, Rec. Canterbury Mus. 8 (1): 55.**Helicopsyche albescens** Tillyard, 1924*Helicopsyche albescens* Tillyard, 1924, Trans. Proc. N.Z. Inst. 55: 312.**Helicopsyche howesi** Tillyard, 1924*Helicopsyche howesi* Tillyard, 1924, Trans. Proc. N.Z. Inst. 55: 313.Genus **Rakiura** McFarlane, 1973*Rakiura* McFarlane, 1973, J. R. Soc. N.Z. 3 (1): 26.**Rakiura vernale** McFarlane, 1973*Rakiura vernale* McFarlane, 1973, J. R. Soc. N.Z. 3 (1): 27.

Family LEPTOCERIDAE

Subfamily TRIPLECTIDINAE Ulmer, 1906

Genus **Tripletides** Kolenati, 1859*Tripletides* Kolenati, 1859, Gen. et. spec. Trich. 2: 247.**Tripletides magna** (Walker, 1852)*Leptocerus magnus* Walker, 1852, Cat. neuropterous insects Br. Mus. Part 1: 73.**Tripletides cephalotes** (Walker, 1852)*Leptocerus cephalotes* Walker, 1852, Cat. neuropterous insects Br. Mus. Part 1: 73.**Tripletides obsoleta** (McLachlan, 1862)*Pseudonema obsoleta* McLachlan, 1862, Trans. Ent. Soc. London (3) 1: 305.Genus **Tripletidina** Mosely, 1936*Tripletidina* Mosely, 1936, Trans. R. Ent. Soc. London 85: 107.**Tripletidina oreolimnetes** (Tillyard, 1924)*Tripletides oreolimnetes* Tillyard, 1924, Trans. Proc. N.Z. Inst. 55: 306.

Genus **Hudsonema** Mosely, 1936

Hudsonema Mosely, 1936, Trans. R. Ent. Soc. London 85: 110.

Hudsonema amabilis (McLachlan, 1868)

Tetracentron amabile McLachlan, 1868, J. Linn. Soc. London Zool. 10: 201.

Hudsonema aliena (McLachlan, 1868)

Leptocerus (?) alienus McLachlan, 1868, J. Linn. Soc. London Zool. 10: 202.

Subfamily LEPTOCERINAE Ulmer, 1903

Genus **Oecetis** McLachlan, 1877

Oecetis McLachlan, 1877, Revision Synopsis Trichoptera European Fauna, 329.

Oecetis unicolor (McLachlan, 1868)

Setodes unicolor McLachlan, 1868, J. Linn. Soc. London Zool. 10: 203.

Oecetis chathamensis Tillyard, 1925

Chatham Is

Oecetis chathamensis Tillyard, 1925, Rec. Canterbury Mus. 2 (5): 277.

Oecetis iti McFarlane, 1964

Oecetis iti McFarlane, 1964, Rec. Canterbury Mus. 8 (1): 57.

Order LEPIDOPTERA

Suborder DITRYZIA

Superfamily PYRALOIDEA

Family PYRALIDAE

Subfamily NYMPHULINAE

Genus **Nymphula** Schrank, 1802

Nymphula Schrank, 1802, F. Boica 2 (2): 162.

Nymphula nitens (Butler, 1880)

Paraponyx nitens Butler, 1880, Cist. Ent. 2: 556.

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REFERENCES AND BIBLIOGRAPHY

ALEXANDER, C. P.

1959 New or little known Tipulidae (Diptera). CVI. Oriental-Australasian species. *Ann. Mag. Nat. Hist.* (13) 1 (10): 657-676.

1972 Insects of Micronesia. Diptera: Tipulidae. *Insects Micronesia* 12 (8): 733-863.

ALLEN, K. R.

1951 The Horokiwi Stream. A study of a trout population. *N.Z. Mar. Dep. Fish. Bull.* 10: 1-231.

1952 A New Zealand trout stream. *N.Z. Mar. Dep. Fish. Bull.* 10A: 1-70.

1959 The distribution of stream bottom faunas. *Proc. N.Z. Ecol. Soc.* 6: 5-8.

1961 Relations between Salmonidae and the native freshwater fauna in New Zealand. *Proc. N.Z. Ecol. Soc.* 8: 66-70.

ARMSTRONG, J. S.

1935 Notes on the biology of Lake Taupo. *Trans. Proc. R. Soc. N.Z.* 65: 88-94.

- 1958a The breeding habits of the Corduliidae (Odonata) in the Taupo district of New Zealand. *Trans. R. Soc. N.Z.* 85: 275-282.
- 1958b Notes on the occurrence of *Hemianax papuensis* (Burm.) in New Zealand. *Trans. R. Soc. N.Z.* 85: 713-714.
- 1958c Notes on *Ischnura aurora* (Brauer), Odonata. *N.Z. Ent.* 2 (2): 2-3.
- BARCLAY, M. H.
1964 Some of the common pond Arthropoda of the Auckland district. *Tane* 10: 40-48.
- BARKER, M. A.
1966 The influence of physico-chemical factors on the distribution of *Chironomus zealandicus* in Lake Pupuke. *Tane* 12: 93-95.
- BAYLY, I. A. E.
1967 The fauna and chemical composition of some athalassic saline waters in New Zealand. *N.Z. J. Mar. Freshwat. Res.* 2: 105-117.
- BELKIN, J. H.
1962 *The mosquitoes of the South Pacific (Diptera, Culicidae)*. University of California Press, Berkeley. 2 vols.
1968 Mosquito studies (Diptera, Culicidae) VII. The Culicidae of New Zealand. *Contr. Am. Ent. Inst.* 3 (1): 1-182.
- BROCK, T. D. and M. L. BROCK
1971 Microbiological studies of thermal habitats of the central volcanic region, North Island, New Zealand. *N.Z. J. Mar. Freshwat. Res.* 5 (2): 233-258.
- BRUNDIN, L.
1962 Insects of Macquarie Island. Diptera: Chironomidae. *Pacific Insects* 4 (4): 945-954.
1966 Transantarctic relationships and their significance, as evidenced by chironomid midges. With a monograph of the subfamilies Podonominae and Aphroteniinae and the austral Heptagytiae. *Kunl. Sv. Vet. Akad. Handl.* (4) 11 (1): 1-472.
- BURNET, A. M. R.
1973 Effects of Paraquat on invertebrates in a Canterbury stream, New Zealand. *N.Z. J. Mar. Freshwat. Res.* 6 (4): 448-455.
- BYARS, J. A.
1960 A freshwater pond in New Zealand. *Aust. J. Mar. Freshwat. Res.* 11 (2): 222-240.
- COBBEN, R. H.
1961 A new genus and four new species of Saldidae (Heteroptera). *Ent. Ber., Amsterdam* 21: 96-107.
- COLLESS, D. H. and D. K. MCALPINE
1970 Diptera (flies). In *The insects of Australia*. Melbourne University Press, Carlton, pp. 656-740.
- COLLIN, J. E.
1928 *New Zealand Empididae. Based on material in the British Museum (Natural History)*. British Museum, London. 110pp.
- CRAIG, D. A.
1963 The occurrence of nematodes in the family Blepharoceridae (Diptera). *N.Z. Ent.* 3 (2): 25.
1966 Techniques for rearing stream-dwelling organisms in the laboratory. *Tuatara* 14 (2): 65-72.
1967a A reinterpretation of the larval maxilla of the Blepharoceridae (Diptera, Nematocera). *Trans. R. Soc. N.Z. Zool.* 8 (17): 187-189.
1967b The eggs and embryology of some New Zealand Blepharoceridae (Diptera, Nematocera) with reference to the embryology of other Nematocera. *Trans. R. Soc. N.Z. Zool.* 8 (18): 191-206.
1969 A taxonomic revision of New Zealand Blepharoceridae and the origin and evolution of the Australasian Blepharoceridae (Diptera: Nematocera). *Trans. R. Soc. N.Z. Biol. Sci.* 11 (9): 101-151.
- CROWSON, R. A.
1967 *The natural classification of the families of Coleoptera*. Classey, Hampton. 214pp.
- CUNNINGHAM, B. T., N. T. MOAR, A. W. TORRIE and P. J. PARR
1953 A survey of the western coastal dune lakes of the North Island, New Zealand. *Aust. J. Mar. Freshwat. Res.* 4: 343-386.

- DACRE, J. C. and D. SCOTT
 1973 Effects of Dieldrin on brown trout in field and laboratory studies. *N.Z. J. Mar. Freshwat. Res.* 7 (3): 235-246.
- DEEVEY, E. S. Jr.
 1955 Paleolimnology of the upper swamp deposit, Pyramid Valley. *Rec. Canterbury Mus.* 6 (4): 291-344.
- DEMOULIN, G.
 1969 Sur la position systematique et phylogenetique des Rallidentinae (Ephemeroptera). *Bull. Inst. r. Sci. nat. Belg.* 45 (15): 1-5.
- DICKINSON, P.
 1951 Field notes for the freshwater naturalist. *Dominion Mus. Handb.* 3: 1-37.
- DIVISION OF ENTOMOLOGY, COMMONWEALTH SCIENTIFIC and INDUSTRIAL RESEARCH ORGANISATION (SPONSOR)
 1970 *The insects of Australia*. Melbourne University Press, Carlton. 1029pp.
- DOBROWORSKY, N. V.
 1972 A gynandromorph of *Culiseta novaezealandiae* Pillai (Diptera: Culicidae). *J. Aust. Ent. Soc.* 11: 150-151.
- DON, A. W.
 1967 Aspects of the biology of *Microvelia macgregori* Kirkaldy (Heteroptera: Veliidae). *Proc. R. Ent. Soc. Lond. (A)* 42 (10-12): 171-179.
- DUMBLETON, L. J.
 1953 Notes on New Zealand Diptera. *Trans. R. Soc. N.Z.* 81 (2): 239-244.
 1962a A new species and new sub-genus of *Aedes* (Diptera: Culicidae) from New Zealand. *N.Z. J. Sci.* 5 (1): 17-27.
 1962b Taxonomic characters in the pre-adult stages of Simuliidae (Diptera). *N.Z. J. Sci.* 5 (4): 496-506.
 1963a New Zealand Blepharoceridae (Diptera: Nematocera). *N.Z. J. Sci.* 6 (2): 234-258.
 1963b The classification and distribution of the Simuliidae (Diptera) with particular reference to the genus *Austrosimulium*. *N.Z. J. Sci.* 6 (3): 320-357.
 1963c Rediscovery of the mosquito *Aedes subalbirostris* Klein and Marks. *N.Z. Ent.* 3 (2): 26-27.
 1963d Evolution in some aquatic Nematocera (Diptera). *N.Z. Ent.* 3 (2): 34-41.
 1964 The first instar larva in the genus *Austrosimulium* (Diptera: Simuliidae). *N.Z. J. Sci.* 7 (1): 32-37.
 1965 Developmental stages and biology of *Culiseta tonnoiri* (Edwards) and a note on *Culex pervigilans* Bergroth (Diptera: Culicidae). *N.Z. J. Sci.* 8 (2): 137-143.
 1966 Immature stages of two aquatic Empididae (Dipt.). *N.Z. J. Sci.* 9 (3): 565-568.
 1968 A synopsis of the New Zealand mosquitoes (Diptera Culicidae) and a key to the larvae. *Tuatara* 16 (3): 167-179.
 1969a Canterbury Diptera. In V. M. Stout, *The natural history of Canterbury*. pp. 484-486.
 1969b A new species of *Ephydrella* Tonnoir and Malloch (Diptera: Ephydriidae) from hot springs and notes on other Diptera from mineralised waters. *N.Z. Ent.* 4 (2): 38-46.
 1970a Pleistocene climates and insect distributions. *N.Z. Ent.* 4 (3): 3-23.
 1970b The present status of taxonomic entomology in New Zealand. Aquatic orders and Neuroptera. *N.Z. Ent.* 4 (3): 38-40.
 1971 The biting midge *Styloconops myersi* (Tonnoir) (Diptera: Ceratopogonidae), description of male and redescription of female. *N.Z. J. Sci.* 14: 270-275.
 1973a An ice chironomid. *N.Z. Ent.* 5 (2): 131-133 (January).
 1973b The genus *Austrosimulium* Tonnoir (Diptera: Simuliidae) with particular reference to the New Zealand fauna. *N.Z. J. Sci.* 15 (4): 480-584 (issued 16 Feb. 1973).
- EDMUNDS, G. F., Jr.
 1972 Biogeography and evolution of Ephemeroptera. *A. Rev. Ent.* 17: 21-42.
- EDMUNDS, G. F., Jr., R. K. ALLEN and W. L. PETERS
 1963 An annotated key to the nymphs of the families and subfamilies of mayflies (Ephemeroptera). *Univ. Utah Biol. Ser.* 13 (1): 1-49.
- EDWARDS, J. S.
 1952 Submergence of a stream-side weta (*Paraneonetus* sp.). *N.Z. Ent.* 1 (2): 7-8.

- FOOT, M. A.
 1970a An agar-gel immunodiffusion method for blood meal identification in *Aedes (Finlaya) notoscriptus* Skuse (Diptera: Culicidae). *N.Z. Ent.* 4 (3): 95-98.
 1970b Ecological studies on *Aedes notoscriptus* (Diptera: Culicidae). *N.Z. Ent.* 4 (4): 20-30.
- FORSYTH, D.
 1968 Laboratory colonisation of *Paradixa neozelandica* Tonnoir. In J. H. Belkin, *Contr. Am. Ent. Inst.* 3 (1): 179-180.
 1971 Some New Zealand Chironomidae (Diptera). *J. R. Soc. N.Z.* 1 (2): 113-144.
- FRASER, F. C.
 1957 *A reclassification of the order Odonata*. Royal Zoological Soc. N.S.W., Sydney. 133pp.
 1960 *A handbook of the dragonflies of Australasia*. Royal Zoological Soc. N.S.W., Sydney. 67pp.
- FREEMAN, P.
 1959 A study of the New Zealand Chironomidae (Diptera, Nematocera). *Bull. Br. Mus. Nat. Hist. Ent.* 7 (9): 395-437.
 1961 The Chironomidae (Diptera) of Australia. *Aust. J. Zool.* 9: 611-737.
- GRESSITT, J. L., K. P. RENNELL and K. A. J. WISE
 1964 Insects of Campbell Island. Ecology. *Pacific Insects Monogr.* 7: 515-530.
- GRESSITT, J. L., and K. A. J. WISE
 1971 Entomology of the Auckland and other islands south of New Zealand: Introduction. *Pacific Insects Monogr.* 27: 1-45.
- HAEGER, J. S., and M. W. PROVOST
 1965 Colonization and biology of *Opifex fuscus*. *Trans. R. Soc. N.Z. Zool.* 6 (3): 21-31.
- HIRSCH, A.
 1958 Biological evaluation of organic pollution of New Zealand streams. *N.Z. J. Sci.* 1: 500-553.
- HOPKINS, C. L.
 1965 Feeding relationships in a mixed population of freshwater fish. *N.Z. J. Sci.* 8: 149-157.
 1970 Some aspects of the bionomics of fish in a brown trout nursery stream. *N.Z. Mar. Dep. Fish. Res. Bull.* 4: 1-38.
- HOPKINS, C. L., H. V. BREWERTON and H. J. W. MCGRATH
 1966 The effect on a stream fauna of an aerial application of DDT prills to pasture land. *N.Z. J. Sci.* 9: 236-248.
- HUDSON, G. V.
 1934 *New Zealand beetles and their larvae*. Ferguson and Osborne, Wellington. 236pp.
- ILLIES, J.
 1960 Archiperlaria, eine neue Unterordnung der Plecopteren. (Revision der Familien Eustheniidae und Diamphipnoidae) (Plecoptera). *Beitr. Ent.* 10 (7, 8): 661-697.
 1961a Südamerikanische Notonemourinae und die Stellung der Unterfamilie im System der Plecopteren. *Mitt. Schweiz. Ent. Ges.* 34 (2): 97-126.
 1961b Verbreitungsgeschichte der Plecopteren auf der Südhemisphäre. *XI. Intern. Kongr. Ent. Wien Verh.* 1: 476-480.
 1962 Die Unterordnungen, Familien und Gattungen der Plecoptera. *XI. Intern. Kongr. Ent. Wien Verh.* 3: 263-267.
 1963a The Plecoptera of the Auckland and Campbell Islands. *Rec. Dominion Mus.* 4 (19): 255-265.
 1963b Revision der südamerikanischen Gripopterygidae (Plecoptera). *Mitt. Schweiz. ent. Ges.* 36 (3): 145-248.
 1964a Die Plecopteren-Unterfamilie Andiperlinae (Auflösung einer unnatürlichen Negativgruppe nach Remane). *Zool. Anz.* 172 (1): 37-48.
 1964b Insects of Campbell Island. Plecoptera. *Pacific Insects Monogr.* 7: 208-215.
 1965 Phylogeny and zoogeography of the Plecoptera. *A. Rev. Ent.* 10: 117-140.
 1969 Revision der Plecopterenfamilie Austroperlidae. *Ent. Tidskr.* 90 (1, 2): 19-51.
- JACQUEMART, S.
 1965 Contribution à la connaissance de la faune trichoptérologique de la Tasmanie et de la Nouvelle-Zélande. *Bull. Inst. r. Sci. nat. Belg.* 41 (35): 1-47.
- KIMMINS, D. E.
 1960 Corrections to 'The Trichoptera (caddis-flies) of Australia and New Zealand' (1953, Mosely and Kimmins). *Ent. Mon. Mag.* 95: 182-185.

- KLEIN, J-M. and E. N. MARKS
 1960 Australian mosquitoes described by Macquart. I. Species in the Paris Museum . . . New synonymy and a new species from New Zealand. *Proc. Linn. Soc. N.S.W.* 85 (1): 107-116.
- KNIGHT, K. L. and E. N. MARKS
 1952 An annotated checklist of the mosquitoes of the subgenus *Finlaya*, genus *Aedes*. *Proc. U.S. Natn. Mus.* 101: 513-574.
- LAMB, K. P.
 1961 Note on the distribution of larvae of *Chironomus novaezealandiae* Hudson relative to salinity of the environment. *N.Z. J. Sci.* 4 (2): 248-249.
- LAURENCE, B. R. and P. L. MATHIAS
 1972 The biology of *Leptoconops (Styloconops) spinosifrons* (Carter) (Diptera, Ceratopogonidae) in the Seychelles Islands, with descriptions of the immature stages. *J. Med. Ent.* 9 (1): 51-59.
- LEADER, J. P.
 1970 Hairs of the Hydroptilidae (Trichoptera). *Tane* 16: 121-129.
 1972a The New Zealand Hydroptilidae (Trichoptera). *J. Ent.* (B) 41 (2): 191-200.
 1972b Osmoregulation in the larva of the marine caddis fly, *Philanisus plebeius* (Walk.) (Trichoptera). *J. Exp. Biol.* 57: 821-838.
- LIEFTINCK, M. A.
 1960 Considerations on the genus *Lestes* Leach with notes on the classification and descriptions of new Indo-Australian species and larval forms (Odonata, Lestidae). *Nova Guinea Zool.* 8: 127-171.
- MARKS, E. N.
 1958 Notes on *Opifex fuscus* Hutton (Diptera: Culicidae) and the scope for further research on it. *N.Z. Ent.* 2 (2): 20-25.
- MARKS, E. N. and E. R. NYE
 1963 The subgenus *Ochlerotatus* in the Australian region (Diptera: Culicidae) VI. The New Zealand species. *Trans. R. Soc. N.Z. Zool.* 4: 49-60.
- MARPLES, B. J.
 1962 *An introduction to freshwater life in New Zealand*. Whitcombe and Tombs, Christchurch. 160pp.
- MARSHALL, J. W.
 1973 A benthic study of the Avon Spring Stream, Christchurch. *Mauri Ora* 1: 79-90.
- MASON, J. J.
 1973 Breeding *Saldula parvula* (Heteroptera: Saldidae) in the laboratory. *N.Z. Ent.* 5 (2): 137-142.
- MAY, B. M.
 1963 New Zealand cave fauna. II — The limestone caves between Port Waikato and Piopio districts. *Trans. R. Soc. N.Z. Zool.* 3 (19): 181-204.
 1970 Aquatic adaptation in the larva of *Desiantha ascita* (Coleoptera: Curculionidae). *N.Z. Ent.* 4 (4): 7-11.
- McFARLANE, A. G.
 1956 Additions to the New Zealand Trichoptera (Part 3). *Rec. Canterbury Mus.* 7 (1): 29-41.
 1960 Additions to the New Zealand Trichoptera (Part 4). *Rec. Canterbury Mus.* 7 (3): 203-218.
 1964 A new endemic subfamily, and other additions and emendations to the Trichoptera of New Zealand (Part 5). *Rec. Canterbury Mus.* 8 (1): 55-79.
 1966 New Zealand Trichoptera (Part 6). *Rec. Canterbury Mus.* 8 (2): 137-161.
 1969 Trichoptera. In V. M. Stout, *The natural history of Canterbury*. pp. 481-483.
 1973 Five new species of Trichoptera from New Zealand. *J. R. Soc. N.Z.* 3 (1): 23-34.
- MCGREGOR, D. D.
 1963 Mouth-brush dimorphism in *Opifex fuscus* Hutton (Diptera: Culicidae). *Bull. Ent. Res.* 54: 325-327.
 1965 Aspects of the biology of *Opifex fuscus* Hutton (Diptera: Culicidae). *Proc. R. Ent. Soc. Lond.* (A) 40 (1-3): 9-14.

- MCLEAN, J. A.
 1966 A comparative ecological study of three stream faunas in the Auckland area. *Tane* 12: 97-102.
 1967a Studies of Ephemeroptera in the Auckland area I: Light trapping in Cascade Kauri Park. *Tane* 13: 99-102.
 1967b Studies of Ephemeroptera in the Auckland area II: Observations on flight activity in the Waitakere Stream. *Tane* 13: 102-105.
 1970 Studies on the larva of *Oniscigaster wakefieldi* (Ephemeroptera: Siphonuridae) in Waitakere Stream, Auckland. *N.Z. J. Mar. Freshwat. Res.* 4: 36-45.
- MCLELLAN, I. D.
 1965 Notes on some New Zealand Plecoptera. *Trans. R. Soc. N.Z. Zool.* 6 (22): 229-234.
 1966 Genitalia and nymphs of some Gripopterygidae (Plecoptera). *Trans. R. Soc. N.Z. Zool.* 8 (2): 5-22.
 1967 New gripopterygids (Plecoptera) of New Zealand. *Trans. R. Soc. N.Z. Zool.* 9 (1): 1-15.
 1968 A revision of the genus *Notonemoura* (Plecoptera: Notonemourinae). *Trans. R. Soc. N.Z. Zool.* 10 (14): 133-140.
 1969 A revision of the genus *Zelandobius* (Plecoptera: Antartcopterlinae). *Trans. R. Soc. N.Z. Biol. Sci.* 11 (3): 25-41.
 1973 Revisions and new taxa in New Zealand Notonemouridae (Insecta: Plecoptera). *N.Z. J. Mar. Freshwat. Res.* 6 (4): 469-481 (issued 24 April, 1973).
- MCLELLAN, I. D. and M. J. WINTERBOURN
 1968 A new genus of Notonemourinae (Plecoptera, Capniidae) from New Zealand. *Trans. R. Soc. N.Z. Zool.* 10 (13): 127-131.
- MICHAELIS, F. B.
 1973 The distribution and life history of *Rakiura vernale* (Trichoptera: Helicopsychidae). *J. R. Soc. N.Z.* 3 (2): 295-304.
- MILLER, D.
 1950 Catalogue of the Diptera of the New Zealand sub-region. *N.Z. Dep. Scient. Ind. Res. Bull.* 100: 1-194.
 1956 Bibliography of New Zealand Entomology 1775-1952 (with annotations). *N.Z. Dep. Scient. Ind. Res. Bull.* 120: 1-492.
 1969 Notes and records. *N.Z. Ent.* 4 (2): 23-25.
 1971 *Common insects in New Zealand*. Reed, Wellington. 178pp.
- MILLER, D. and M. N. WATT
 1915 Contributions to the study of New Zealand entomology, from an economical and biological standpoint: . . . *Trans. Proc. N.Z. Inst.* 47: 274-284.
- MOSELY, M. E. and D. E. KIMMINS
 1953 *The Trichoptera (caddis-flies) of Australia and New Zealand*. British Museum, London. 550pp.
- MYERS, J. G.
 1921 Notes on the Hemiptera of the Kermadec Islands, with an addition to the Hemiptera fauna of the New Zealand subregion. *Trans. Proc. N.Z. Inst.* 53: 256-257.
- NYE, E. R.
 1962 *Aedes (Pseudoskusea) australis* Erichson (Diptera, Culicidae) in New Zealand. *Trans. R. Soc. N.Z. Zool.* 3: 33-34.
- NYE, E. R. and D. D. MCGREGOR
 1964 Mosquitoes of Otago. *Rec. Otago Mus. Zool.* 1: 1-23.
- OCHS, G.
 1949 A revision of the Australian Gyrinidae. *Rec. Aust. Mus.* 22: 171-199.
- O'FARRELL, A. F.
 1970 Odonata (dragonflies and damselflies). In *The insects of Australia*. Melbourne University Press, Carlton. pp. 241-261.
- ORDISH, R. G.
 1966 A systematic revision of the New Zealand water beetles (Coleoptera: Dytiscidae). *Rec. Dominion Mus.* 5 (22): 217-264.
 1967 The identification of New Zealand water beetles (Dytiscidae). *Tuatara* 15 (1): 1-9.
- PENDERGRAST, J. G.
 1959 The occurrence of the family Mesoveliidae in New Zealand. *N.Z. Ent.* 2 (4): 28.

- PENDERGRAST, J. G. and D. R. COWLEY
1966 *An introduction to New Zealand freshwater insects*. Collins, Auckland. 100pp.
- PENNIKET, J. G.
1961 Notes on New Zealand Ephemeroptera. I. The affinities with Chile and Australia, and remarks on *Atalophlebia* Eaton (Leptophlebiidae). *N.Z. Ent.* 2 (6): 1-11.
1962a Notes on New Zealand Ephemeroptera II. A preliminary account of *Oniscigaster wakefieldi* McLachlan, recently rediscovered (Siphonuridae). *Rec. Canterbury Mus.* 7 (5): 375-388.
1962b Notes on New Zealand Ephemeroptera III. A new family, genus and species. *Rec. Canterbury Mus.* 7 (5): 389-398.
1966a Keys to the nymphs and adults of the New Zealand Odonata. *Rec. Canterbury Mus.* 8 (2): 87-92.
1966b Notes on New Zealand Ephemeroptera IV. A new siphonurid subfamily: Rallidentinae. *Rec. Canterbury Mus.* 8 (2): 163-175.
1969 Ephemeroptera (mayflies). In V. M. Stout, *The natural history of Canterbury*. pp. 474-477.
- PERCIVAL, E.
1932 On the depreciation of trout-fishing in the Oreti (or New River), Southland, with remarks on conditions in other parts of New Zealand. *N.Z. Mar. Dep. Fish. Bull.* 5: 1-48.
- PETERS, W. L.
1971 Entomology of the Aucklands and other islands south of New Zealand: Ephemeroptera: Leptophlebiidae. *Pacific Insects Monogr.* 27: 47-51.
- PHILLIPS, J. S.
1929 A report on the food of trout and other conditions affecting their well-being in the Wellington district. *N.Z. Mar. Dep. Fish. Bull.* 2: 1-31.
- PILGRIM, R. L. C.
1969 Mecoptera (scorpion-flies). In V. M. Stout, *The natural history of Canterbury*. p. 480.
1970 Knowledge of New Zealand Mecoptera, Mallophaga, Anoplura and Siphonaptera. *N.Z. Ent.* 4 (3): 72-79.
1972 The aquatic larva and the pupa of *Choristella philpotti* Tillyard, 1917 (Mecoptera: Nannochoristidae). *Pacific Insects* 14 (1): 151-168.
- PILLAI, J. S.
1965 Notes on mosquitoes of New Zealand I. *Maorigoeldia argyropus* Walker (Diptera, Culicidae, Sabethini). *N.Z. Ent.* 3 (4): 25-35.
1966 *Culiseta novaezealandiae*, a new species of the subgenus *Climacura* Felt (Diptera: Culicidae: Culisetini), with notes on its ecology and development. *Trans. R. Soc. N.Z. Zool.* 8 (11): 125-133.
1968a Notes on mosquitoes of New Zealand II. The male terminalia of *Culiseta (Climacura) tonnoiri* and its ecology (Diptera: Culicidae: Culisetini). *J. Med. Ent.* 5 (3): 355-357.
1968b *Thelohania barra* n. sp., a microsporidian parasite of *Aedes (Halaedes) australis* Erichson, in New Zealand. *Z. angew. Ent.* 62 (4): 395-398.
1969 A *Coelomyces* infection of *Aedes australis* in New Zealand. *J. Invertebr. Pathol.* 14: 93-95.
- PILLAI, J. S. and F. N. MACNAMARA
1968 A portable mosquito trap for use with a bantam fowl. *Mosquito News* 28 (1): 87-90.
- PILLAI, J. S. and J. M. B. SMITH
1968 Fungal pathogens of mosquitoes in New Zealand I. *Coelomyces opifexi* sp. n., on the mosquito *Opifex fuscus* Hutton. *J. Invertebr. Pathol.* 11: 316-320.
- RIEK, E. F.
1970 Megaloptera (alderflies) In *The insects of Australia*. Melbourne University Press, Carlton. pp. 465-471.
- ROSS, H. H.
1967 The evolution and past dispersal of the Trichoptera. *A. Rev. Ent.* 12: 169-206.
- SAMAL, J.
1921 O nekterych novych a malo znamych druzich Plecopteri asijsko-australske oblasti. *Cas. csl. Spol. ent.* 18 (1, 2): 14-24, (3, 4): 58-70.

- SATCHELL, G. H.
1954 Keys to the described species of New Zealand Psychodidae with descriptions of eight new species. *Trans. R. Ent. Soc. Lond.* 105 (2): 475-491.
- SCOTT, R. R.
1971 The larval instars of *Xanthocnemis zealandica* (Odonata: Coenagrionidae). *N.Z. Ent.* 5 (1): 38-46.
- SHARELL, R.
1971 *New Zealand insects and their story*. Collins, Auckland. 268 pp.
- SMITH, K. G. V.
1964 Insects of Campbell Island. Diptera: Empididae. *Pacific Insects Monogr.* 7: 325-328.
- SPILLER, D.
1965 Methods used for chironomid larva surveys of sewage oxidation ponds and natural waters at Auckland, New Zealand. *California Vector Views* 12 (3): 9-15.
- SPILLER, D. and D. J. FORSYTH
1970 The kiosk pond, Auckland Domain, with special reference to *Chironomus zealandicus* Hudson. *N.Z. Ent.* 4 (3): 125-135.
- STOUT, V. M.
1969a Life in lakes and ponds. *The natural history of Canterbury*. Reed, Wellington. pp. 458-470.
1969b The invertebrate fauna of the rivers and streams. *The natural history of Canterbury*. Reed, Wellington. pp. 471-497.
- TILLYARD, R. J.
1926 *The insects of Australia and New Zealand*. Angus and Robertson, Sydney. 560pp.
- WATSON, G. W.
1972 The lotic fauna of Red Mercury Island (Whakau). *Tane* 18: 67-79.
- WINTERBOURN, M. J.
1964a A key to the larvae of the more commonly found stream insects. *Tane* 10: 36-39.
1964b A survey of the stream fauna of Little Barrier Island. *Tane* 10: 59-69.
1965 Studies on New Zealand stoneflies I. Taxonomy of larvae and adults. *N.Z. J. Sci.* 8 (3): 253-284.
1966 Studies on New Zealand stoneflies 2. The ecology and life history of *Zelandoperla maculata* (Hare), and *Aucklandobius trivacuatus* (Tillyard) — (Gripopterygidae). *N.Z. J. Sci.* 9 (2): 312-323.
1968a The New Zealand species of *Spaniocerca* (Plecoptera, Notonemourinae) and a generic correction in the Notonemourinae. *N.Z. J. Mar. Freshwat. Res.* 2 (1): 29-36.
1968b The faunas of thermal waters in New Zealand. *Tuatara* 16 (2): 111-122.
1969 The distribution of algae and insects in hot spring thermal gradients at Waimangu, New Zealand. *N.Z. J. Mar. Freshwat. Res.* 3 (3): 459-465.
1970 The Hydrophilidae (Coleoptera) of New Zealand's thermal waters. *Trans. R. Soc. N.Z. Biol. Sci.* 12 (4): 21-28.
1973a The larva of *Anacaena tepida* (Coleoptera: Hydrophilidae) from a Rotorua hot spring. *N.Z. Ent.* 5 (2): 171-174.
1973b Ecology of the Copland River warm springs, South Island, New Zealand. *Proc. N.Z. Ecol. Soc.* 20: 72-78.
- WINTERBOURN, M. J. and T. J. BROWN
1967 Observations on the faunas of two warm streams in the Taupo thermal region. *N.Z. J. Mar. Freshwat. Res.* 1 (1): 38-50.
- WISE, K. A. J.
1956 Aquatic insects of Little Barrier Island. *Rec. Auckland Inst. Mus.* 4 (6): 321-327.
1958a Trichoptera of New Zealand I. A catalogue of the Auckland Museum collection with descriptions of new genera and new species. *Rec. Auckland Inst. Mus.* 5 (1, 2): 49-63.
1958b Notes on insect pests. *N.Z. Ent.* 2 (2): 26-28.
1961 Larvae of three aquatic beetles. *N.Z. Ent.* 2 (6): 18-22.
1962a A new genus and three new species of Trichoptera. *Rec. Auckland Inst. Mus.* 5 (5, 6): 247-250.
1962b Characters for the determination of damselfly nymphs (Odonata: Zygoptera) in New Zealand. *N.Z. Ent.* 3 (1): 56-59.
1963 A list of the Neuroptera of New Zealand. *Pacific Insects* 5 (1): 53-58.
1964 Insects of Campbell Island. Trichoptera. *Pacific Insects Monogr.* 7: 253-254.

- 1965 An annotated list of the aquatic and semi-aquatic insects of New Zealand. *Pacific Insects* 7 (2): 191-216.
- 1970 Trichoptera of New Zealand II. The present status of R. J. Tillyard's species of New Zealand Trichoptera, with notes on the type specimens. *Rec. Auckland Inst. Mus.* 7: 201-215.
- 1972 Trichoptera of the Auckland Islands. *Rec. Auckland Inst. Mus.* 9: 253-267.
- WISELY, B.
- 1953 Two wingless alpine stoneflies (order Plecoptera) from southern New Zealand. *Rec. Canterbury Mus.* 6 (3): 219-231.
- 1961 Studies on Ephemeroptera I. — *Coloburiscus humeralis* (Walker); early life history and nymph. *Trans. R. Soc. N.Z. Zool.* 1 (19): 249-257.
- 1962 Studies on Ephemeroptera II. — *Coloburiscus humeralis* (Walker); ecology and distribution of the nymphs. *Trans. R. Soc. N.Z. Zool.* 2 (25): 209-220.
- 1965 Studies on Ephemeroptera III. — *Coloburiscus humeralis* (Walker); morphology and anatomy of the winged stages. *N.Z. J. Sci.* 8: 398-415.
- WOLFE, L. S.
- 1953 A study of the genus *Uropetala* Selys (order Odonata) from New Zealand. *Trans. R. Soc. N.Z.* 80: 245-275.
- WOMERSLEY, H.
- 1953 An interesting new larval species of *Panisopsis* (Thyasidae, Acarina) from New Zealand. *Rec. Canterbury Mus.* 6 (3): 233-235.
- WOODWARD, T. E.
- 1952 The occurrence of *Hydrometra ribesci* Hungerford in New Zealand. *N.Z. Ent.* 1 (2): 9-10.
- 1954 New records and descriptions of Hemiptera - Heteroptera from the Three Kings Islands. *Rec. Auckland Inst. Mus.* 4 (4): 215-233.
- WOODWARD, T. E., J. W. EVANS and V. F. EASTOP
- 1970 Hemiptera (bugs, leafhoppers, etc.). In *The insects of Australia*. Melbourne University Press, Carlton. pp. 387-457.
- YOUNG, E. C.
- 1962 The Corixidae and Notonectidae (Hemiptera - Heteroptera) of New Zealand. *Rec. Canterbury Mus.* 7 (5): 327-374.